Multidisciplinary Research in Humanities, Social Sciences, Commerce and Management

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PREFACE

The book Multidisciplinary Research in Humanities, Social Sciences, Commerce, and Management is a testament to the dynamic and interconnected nature of modern research. In an era defined by rapid globalization, technological advancement, and socio-economic shifts, this compilation seeks to address the complex challenges and opportunities that lie at the intersections of diverse academic disciplines.

Humanities and social sciences provide the foundation for understanding human behavior, culture, and society. They offer insights into the historical, philosophical, and cultural contexts that shape the world we live in. Commerce and management, on the other hand, drive the practical applications of these insights, enabling effective decision-making and fostering innovation in business and economic systems. Together, these disciplines form a comprehensive framework for addressing contemporary issues.

This book brings together a diverse collection of research studies and analyses contributed by scholars, educators, and practitioners. Each chapter reflects a commitment to academic rigor and practical relevance, exploring topics ranging from cultural studies, social dynamics, and behavioral sciences to emerging trends in business, marketing, and organizational management.

The interdisciplinary approach adopted in this volume not only broadens the scope of inquiry but also highlights the synergies that arise when diverse perspectives converge. By bridging theoretical exploration with empirical research, the book offers readers a holistic understanding of critical issues and fosters innovative solutions to real-world challenges.

We extend our heartfelt gratitude to all the contributors for their invaluable efforts in shaping this volume. Their dedication to research and scholarship exemplifies the spirit of inquiry that drives progress in academia and society. We also express our appreciation to the editorial team and reviewers for their meticulous work in ensuring the quality and coherence of this publication.

It is our hope that this book serves as a valuable resource for researchers, educators, students, and professionals. May it inspire further exploration, dialogue, and collaboration across disciplines, paving the way for new horizons in knowledge and understanding.

- Editors

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ADVANCES IN AGRICULTURAL EXTENSION: EVOLVING APPROACHES AND COMMUNITY INVOLVEMENT

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Introduction:

Agricultural extension programs play a crucial role in advancing the agricultural sector. These initiatives, undertaken by governments, non-agricultural organizations, and other stakeholders, aim to educate farmers, disseminate knowledge, provide logistical support, and conduct training sessions and workshops. The ultimate goal is to empower the farming community, enhance agricultural productivity, and improve the livelihoods and living standards of farmers.

Agricultural Extension, as a profession, is a social innovation that originated in the 19th century during the industrialization era. It was developed to extend educational benefits to rural populations. Initially, it began as voluntary efforts by a small group of enlightened individuals. Over time, Agricultural Extension has undergone significant evolution, adapting to various socio-political contexts and experiences. This progress has given rise to multiple approaches, including the project approach, commodity approach, privatized approach, and participatory approach. Additionally, a variety of methods have been developed, ranging from individual-focused to group and mass methods.

This unit explores the diverse approaches, methods, and media used in Agricultural Extension, highlighting its importance in promoting agricultural advancements and supporting rural development.

What is an Approach?

An *approach* refers to a method or way of doing something. It is a strategy or set of principles used to address a specific task or problem. In the context of agricultural extension, an approach refers to the systematic way in which agricultural knowledge, practices, and technologies are delivered to farmers to improve their productivity, livelihoods, and overall well-being. An approach can involve different methodologies, including educational, technological, or participatory techniques, and is shaped by the goals and resources available within a given community or region.

Importance of Approaches in Agricultural Extension

1. **Effective Knowledge Transfer**: Different approaches allow for tailored methods to communicate agricultural knowledge to farmers, ensuring that the information is accessible, relevant, and practical for their specific needs.

2. **Improving Productivity**: The right extension approach can help farmers adopt modern farming techniques, improve crop yields, and increase overall productivity.

3. **Sustainability**: A well-designed extension approach can address long-term issues like food security, environmental sustainability, and the resilience of farming systems against climate change.

4. **Community Empowerment**: Approaches like participatory extension empower farmers to take leadership in the decision-making processes related to their own agricultural development, fostering local ownership and active engagement.

5. **Holistic Solutions**: Different approaches can take a systems perspective, addressing not just agricultural practices but also related issues such as nutrition, income generation, and employment.

6. **Policy Alignment**: Extension approaches help align agricultural development strategies with government policies and international agreements, creating a cohesive framework for growth.

Extension Approaches

Extension work is carried out through various methods to facilitate transformation in rural areas. To address specific needs, different approaches have been adopted, tailored to the socio-economic and political contexts. Based on the type of intervention, extension approaches are categorized as follows:

1. Generalized Extension Approach
2. Commodity Specialized Extension Approach
3. Educational institution Extension approach
4. Project Extension Approach
5. Training and visit Extension Approach
6. Farming systems development Extension approach
7. Privatized Extension Approach
8. Participatory Extension Approach

1. Generalized Extension Approach

This approach to extension work assumes that while suitable technologies for local communities exist, they are underutilized due to a lack of awareness and access. Its main

goal is to bridge this gap by disseminating knowledge and promoting the adoption of these technologies to improve agricultural practices, productivity, and farmers' livelihoods.

Governments play a key role in implementing this approach through structured extension services. A large network of field staff works directly with farmers, supported by middle and senior-level personnel who provide oversight and coordination. These services include the supply of inputs like seeds and fertilizers, access to credit, training programs, and advisory support, equipping farmers with the tools and knowledge they need to adopt new practices.

This resource-intensive approach relies heavily on central government funding to establish the necessary infrastructure and personnel. Its success is measured by the adoption rate of recommended practices and improvements in national agricultural production.

A defining feature of this model is its top-down structure, with decisions and resources managed centrally by government agencies. These agencies oversee the distribution of resources and activities across regions, zones, and counties. While this centralized system ensures uniformity and large-scale implementation, it may struggle to adapt to local contexts. Nevertheless, it has proven effective in achieving significant agricultural advancements, particularly in countries with robust governmental support.

2. Commodity Specialized Extension Approach

This approach is characterized by consolidating all functions related to increasing production—such as extension, research, input supply, marketing, and pricing—under a single administration. It is highly centralized and typically focused on a specific commodity or crop, with extension agents assigned multiple roles.

Commodity crops are economically significant, and their performance is crucial for farmers' livelihoods. Therefore, concerted efforts are necessary to enhance production, including offering long-term incentives to small-scale farmers. This commodity-specialized approach assumes that the best way to boost the productivity and production of a specific crop is to centralize all related functions within one organization. These roles include extension services, research, input supply, marketing of outputs, and planning of extension programs. Field staff from the commodity organization carries out the implementation, and resources are typically provided by the organization itself.

Success in this approach is measured primarily by the total production of the targeted crop. While it is effective in increasing the output of specific commodities, there is a need to consider broader agricultural priorities, including food security, poverty

alleviation, and sustainability, to ensure a balanced and holistic development of the agricultural sector.

3. Educational institution Extension approach

This approach relies on educational institutions with technical expertise and research capabilities to deliver extension services to rural communities. The planning and implementation of these services are typically overseen by educators who design and manage the curriculum, with a strong emphasis on transferring technical knowledge.

In India, state agricultural universities play a dual role in extension, alongside their primary responsibilities of teaching and research. Their clear objective is to transfer technologies developed at the university to the rural population. These institutions operate within a defined and selective jurisdiction, allowing faculty involved in teaching and research to engage directly with farmers. This interaction provides firsthand experience of how the technologies impact users, enabling scientists to refine and improve them for better performance.

Known as the "First Line Extension System" in the country, this approach ensures a direct connection between academic research and practical application, fostering continuous improvement in agricultural practices. Its focus on bridging the gap between research institutions and the rural population makes it a valuable model for technology dissemination and innovation.

4. Project Extension Approach

A project is developed to address a specific problem within a defined area and timeframe. The first requirement is the identification of a problem that needs resolution. This approach focuses on a particular location for a set period and often relies on external resources. It operates on the assumption that with external support, rural communities can significantly enhance their quality of life.

Essentially, it serves as a pilot test, conducted on a small scale with concentrated efforts over a specific period to achieve positive results that can later be scaled up. Part of its objective is to showcase techniques and methods that can be adopted and sustained beyond the project's duration. Typically, it involves substantial external resource investment over a few years to demonstrate the effectiveness of new technologies.

For instance, the Intensive Agricultural District Project (IADP), also known as the Package Project, aimed to transform Indian agriculture by disseminating scientific and technological advancements. This approach prioritizes addressing the needs of beneficiaries and donors, ensuring that projects are both consensus-driven and demand-

driven. Projects selected must cater to the immediate requirements of the beneficiaries or end-users, making them relevant and impactful.

5. Training and visit Extension Approach

This approach is centered on a carefully planned schedule of visits to farmers and training for extension agents and subject matter specialists (SMS). It emphasizes strong connections between research and extension, with agents focused solely on technology transfer. Success is measured by increases in the production of specific crops or commodities.

The Training and Visit (T&V) approach, developed by Israeli scientist Daniel Benor and promoted by the World Bank in various developing countries, is based on the assumption that agricultural messages grounded in research must be continuously communicated to farmers. As a result, extension agents need regular updates to perform effectively. Achieving this requires a robust management system that supports training, visits, monitoring, motivation, resource allocation, and coordination among stakeholders.

The T&V approach is intensive, relying on a structured schedule of visits to farmers and ongoing training for extension agents and SMS. It involves a unique practice of selecting "contact farmers" who possess leadership qualities, with the system primarily focusing on a limited number of such farmers. However, this approach is costly, centralized, and agriculture-focused, often neglecting other aspects of farming life, such as livestock, forestry, and fisheries, which do not receive sufficient attention from the extension services.

6. Farming systems development Extension approach

A key feature of this type of extension is its systems or holistic approach at the local level. The farming systems approach takes a comprehensive view of the farm, farm household, and off-farm activities, addressing not just agricultural production but also factors like nutrition, food security, sustainability, risk reduction, income, and employment generation. These multiple objectives reflect the diverse needs of farm households.

This approach recognizes the interdependencies between the various components managed by household members, as well as how these components interact with physical, biological, and socio-economic factors beyond the household's control. Close collaboration with research is essential, and technology is developed to meet local needs through an ongoing process that involves the local community.

Success is evaluated based on the degree to which local people adopt and continue to use the technologies developed by the program. The farming systems approach emphasizes several key principles:

- Research and extension agendas should be shaped by clearly defined farmers' needs.
- A thorough understanding of existing farming practices is crucial.
- Farmers' participation and the inclusion of their indigenous knowledge are essential.
- The involvement of social scientists and women researchers during problem investigation is necessary.
- Researchers, extension workers, and farmers should collaborate as a team.

7. Privatized Extension Approach

With increasing pressure on governments due to budget constraints and international agreements, reforms in the public sector have become necessary. There is a growing need for intensified efforts to boost agricultural production and add value to it. Extension services must adapt to meet expectations in this changing environment. Given the substantial investments required in extension due to the need for large numbers of staff, transportation, and other support services there is ongoing debate about whether to maintain the current extension system or explore alternative approaches.

While it remains crucial to reach large populations to raise awareness about useful agricultural information, significant efforts are needed for export-oriented agricultural enterprises. Privatization of extension does not mean completely dismantling government departments and handing over responsibilities to private companies. The government will still play a key role in coordinating private agencies, monitoring their services, and acting as an arbitrator in disputes. In favorable policy environments, private firms have proven to be effective in agricultural extension, and they may be willing to provide high-quality services. For resource-rich commercial farmers, fees may be charged for services, while the poor could receive free or subsidized services. This would require careful evaluation of private firms' capabilities to ensure quality service provision and the establishment of performance standards to maintain oversight.

With advances in information technology, tools like video, videodisc, and computers can be utilized to provide agricultural information. Satellite-based communication can also offer expert advice, and local radio has become another valuable communication platform. As a result, the role of public sector extension may include:

- Reaching target audiences that are underserved by the private sector.
- Coordinating multiple extension providers.
- Acting as a final reference or arbitrator in case of conflicts.
- Ensuring accountability for both public and private extension services.

This approach assumes that agricultural technologies have become increasingly complex and that government-run extension services are becoming too costly and unsustainable due to the large number of farmers to be served. Extension workers are often fewer in number and may lack the required expertise. Larger, commercial farmers will need more advanced technological knowledge and skills, which may not be available through grassroots extension workers. To serve these farmers professionally, payment for services will likely be necessary. Meanwhile, small and marginal farmers may be offered subsidized services or vouchers. This shift will change the role of public extension, with a stronger focus on local needs and greater accountability to local interests. Its primary goal will be to provide advice and information that enables farmers to improve independently.

Global experience shows that small and marginal farmers cannot afford to pay for extension services, meaning separate arrangements must be made based on the financial resources of the clients. In this evolving landscape, a variety of organizations are available to support the provision of extension services.

8. Participatory Extension Approach

The concept of Participatory Agricultural Extension emphasizes community ownership and active involvement in the extension process. It involves farmers taking leadership and control over extension activities, allowing them to have a say in both the design and delivery of services. This approach is farmer-centered and non-prescriptive, giving equal importance to farmers alongside other professionals. While formal research and development are valued, it encourages farmers to conduct their own experiments as well. Farmer-to-farmer extension is promoted, and problem-solving starts at the grassroots level, with outsiders playing a facilitative role.

Participatory Agricultural Extension is still evolving, with ongoing efforts to establish it as a way to educate and empower farmers to define and address their own challenges. Farmers are encouraged to take responsibility for initiating, implementing, and evaluating extension programs with external support. Participation involves farmers identifying their problems, determining solutions, designing practical plans, and executing them. Solutions developed and implemented by the community are more likely to succeed than those imposed from outside.

Given that most farmers are small and marginal, costly technical solutions are often not feasible. Therefore, farmers are encouraged to form groups and conduct extension activities tailored to their needs. Participatory extension provides a framework for extension staff to work with village communities in facilitating development planning and activity implementation. This approach ensures that extension efforts are community-driven and that village communities can carry out their planned activities with ongoing monitoring and evaluation. Success is measured by the level of farmer participation and the sustainability of local extension organizations.

Constraints in Agricultural Extension Approaches

1. **Resource Limitations**: Many agricultural extension services are constrained by limited financial resources, making it difficult to implement extensive, wide-reaching programs. This can limit the number of field agents, training sessions, and the availability of materials.

2. **Lack of Skilled Personnel**: In some regions, there may be a shortage of qualified extension agents, making it challenging to effectively deliver services to farmers. Additionally, the quality and capacity of staff may be insufficient to meet the diverse needs of the farming community.

3. **Cultural and Social Barriers**: Extension programs may face resistance from farmers due to cultural differences, lack of trust in external advice, or the inability to adapt new technologies to local practices.

4. **Inadequate Infrastructure**: In rural or remote areas, poor infrastructure (e.g., roads, transportation, or communication systems) can limit the reach and effectiveness of extension services.

5. **Fragmented Communication**: Lack of coordination between research, extension services, and farmers can hinder the effective flow of information and lead to inefficiencies in program delivery.

6. **Economic Constraints**: Farmers in economically disadvantaged areas may not have the financial capacity to adopt new technologies or practices, limiting the impact of extension efforts.

7. **Political and Policy Challenges**: Extension programs may face political interference, inconsistent government support, or inadequate policies, leading to instability and inefficiency in the system.

8. **Technological Barriers**: In some regions, access to modern technology and the internet is limited, which can impede the use of digital tools and modern extension methods that rely on technology-based solutions.

Conclusion:

Agricultural extension plays a critical role in enhancing the productivity and sustainability of farming systems, particularly in developing regions. Over the years, various approaches to extension work have been developed and adapted to meet the unique needs of rural communities. These approaches, ranging from traditional methods to more innovative, participatory, and technology-driven models, aim to address key issues such as food security, income generation, and sustainability. While challenges like budgetary constraints, the need for modernization, and the expansion of market-oriented agriculture remain, there is a growing recognition of the importance of involving farmers directly in the design, delivery, and evaluation of extension services.

The evolving role of the public sector, in collaboration with private and non-governmental actors, highlights the need for a flexible, community-driven approach that tailors extension services to local conditions and resource availability. As new technologies and methodologies emerge, agricultural extension will continue to serve as a vital mechanism for knowledge transfer, fostering innovation, and improving the livelihoods of farmers. The success of agricultural extension systems depends not only on the adoption of appropriate technologies but also on creating an inclusive and supportive environment that empowers farmers to solve their own problems, leading to long-term sustainable development in rural areas.

Ultimately, a shift toward a more decentralized, farmer-led, and resource-conscious approach to extension is essential for ensuring that agricultural development remains responsive to the challenges and opportunities of the 21st century.

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INTELLECTUAL RECOMMENDATION SYSTEM TO ESTIMATE TEACHING FACULTY PERFORMANCE USING ADAPTIVE COLLABORATIVE FILTERING

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Abstract:

This work presents an intelligent recommender system using Deep learning model for the performance evaluation and enhancement of teachers in the educational institution. This work utilizes various features like student's assessment, intake quality, innovative practices, experiential learning methods, etc to present a recommendation framework. The dataset used to train the proposed recommender and evaluate its performance and derived through the ERP of an educational institute. The major contribution of this research work is the implementation ofadaptive collaborative filtering-based recommender system for the teacher's recommendation. The impact of the outcome of this recommender has the potential to improve the academic framework and student's performance many folds. Proposed model presents a personalized and customized recommendation to specific stakeholder over a particular time period. The common patterns of the preferences of the stakeholders in the educational framework have been identified in this work to utilize them for the effective and impactful recommendation. Various challenges have also been examined here to incorporate the unobserved preferences of the participants which evolve over time. These challenges are addressed and resolved by the proposed recommender system which utilizes the adaptive emission component to derive the personalized recommendations using the global preference patterns. The performance of the proposed systems has been verified and compared with the conventional collaborative filtering based recommender systems through the experimental study to present the superiority of the proposed system.

Keywords: Recommender Systems, Collaborative Filtering, Changing Preference, Dynamic Models, Latent class models.

Introduction:

Education sector has witnessed a revolutionary change over the last few decades due to the advancements in the field of information and communication technologies. The

digital transformation of the teaching and learning process has brought very encouraging modifications. The augmentation of conventional teaching methods with the new communication technologies has improved the learning characteristics of the students in terms of imagination and design thinking. The expectations of the students have also switched to very high level which has made the teachers to develop new skills like communication skills, soft skills, emotional quotient, technology friendly, etc apart from knowledge.

It has also changed the perception of educational administrators and academicians towards the teaching fraternity. The under-resourced institutions emphasize on utilize the knowledge and skills of teachers in a best possible ways. This paradigm shift has made the teachers to update themselves with the state of the art information, recent trends and high end technologies. To keep up with these fast paced changes in the education field, teachers need to have the tremendous will, ability and preparation. The challenges are variable depending upon the level of teaching like primary school, secondary school and higher secondary. The requirements will be very different for professional courses like engineering, medical, pharmacy, management, etc. The theoretical and practical aspects which have to be covered in a subject while teaching are also dependent on the subject's requirements. The diversity in the delivery of content makes the process very complex. The education process followed for multi dimensional curriculum environment is of varying degree and the students taking the respective course are also of different level of intelligence quotient.

The results of students have been the only conventional method for evaluating the performance of teachers. The diversity in quality and intelligence quotient of students has made the conventional evaluation method incomplete. Therefore, the performance evaluation of teachers through the results of students is quite unjustified in most of the cases. Hence to complete the teaching learning process there is requirement of a strategy to assess the performance of teachers through direct assessment parameters.

The last decade has seen a considerable increase in the attention to recommender systems because of its intuitive framework to present suggestions on the basis of available information. It also offers a more personalized experience to the user. The potential of recommender systems can be very well exploited in the education field for presenting suggestions and recommendations to the teachers. Right teacher for specific scenario can be utilized by identifying, the area of expertise of each teacher and the areas which need

improvement to boost the teaching-learning process. However, the dependency of this process of evaluation of teaching process through a recommender system on various parameters makes it a very complex problem.

Recommender systems have completely changed the paradigm of digital marketing over the last decade. These systems have found a vast application in the areas of e-commerce, entertainment, digital publicity, healthcare, etc. The capability of recommender systems to estimate the interest area of consumers and suggest the suitable options have added a completely new dimension in this era of digital market. However, the application of recommender system in the education field has not been explored much. Teaching has always been a very important and demanding profession as it plays a very role in the nation building, character building and humanity building. The growth in the information and communication technologies has changed the complete paradigm of education sector. The methods used for teaching has also been changed a lot as compared to the conventional education system. As the educational framework followed conventionally in most of the countries is very much based on the quantitative assessment. The respective evaluation of the teachers efforts in teaching are traditionally been performed indirectly through the marks which the students have received in the examinations throughout the academic year. However, due to the diversity in the student's quality and their intelligence quotient, the performance evaluation of teachers through the results of students is quite unjustified in most of the cases. Therefore the requirement of a strategy to assess the performance of teachers through direct assessment parameters is the need of the complete teaching learning process.

A self adaptive Hidden Markov Model is used to present an intelligent recommender system for the performance evaluation of the teachers in the educational institution is presented in this work. It also provides the recommendations on the basis of the evaluation and assessment. Various features like student's assessment, intake quality, innovative practices, experiential learning methods, etc to present a recommendation framework have been used in this work to derive the model for recommender system. The dataset used to train the proposed recommender and evaluate its performance and derived through the ERP of an educational institute. The major contribution of this research work is the implementation of self adaptive HMM based recommender system for the teacher's recommendation. The parameters of the HMM framework have been optimized through PSO so as to reduce the time complexity.

This work is organized as follows: section II deals with the review of the existing techniques in the field of recommendation systems and teachers performance evaluation methods. The mathematical framework for the collaborative filtering used in the recommender system is given in section III. The proposed self adaptive HMM based recommender system optimized with PSO is discussed in section IV. Section V discusses the effectiveness of the proposed strategy through the analysis of the performance parameters while section VI concludes the paper.

Related Work

The complex problem of teacher assessment in the field of education is addressed by many researchers. A variety of techniques like statistical, stochastic and intelligent frameworks have been proposed over the last few years on the basis of different parameters which can directly or indirectly affect the performance. In order to identify the advantages and drawbacks of the various strategies presented, several research papers are discussed in this section. The collective analysis of the drawbacks has resulted into the research gap and the rationale henceforth. The research work addressing the problem of teacher evaluation and various state of the art decisions making algorithms are discussed below:

Through variety of activities Fletcher et. al. [1] has proposed a competence evaluation framework on the basis of rewards based model. These activities reflect the potential of teachers in their work. The different activities that are conducted by authors to evaluate the competence are performance appraisal, performance evaluation and review, performance assessment through measurement, employee evaluation, personnel review, staff assessment, service rating, etc.

The evaluation framework was extended by Grote et. al. [2] to the performance analysis of employees on the basis of a different set of parameters. The analytical process has evaluated various aspects of career advancements of an employee like pay hikes, promotion, layoff, training and development, etc. The encouraging results of these assessment models have motivated Hamsa et al [3] to implement it to the performance evaluation of employees of educational organizations also. The scenario of some developing countries was taken to show the orientation of education of these nations. They have collected the academic and non academic performance of the students through information technological tools to create a large dataset. These datasets have been used to

derive the statistical decision model which reflected the performance of students and teachers.

Iam-On and Boongoen [4] proposed a statistical analysis to evaluate the performance through learning management system (LMS), Student Information Systems (SIS), Course Management System (CMS) and local institute database. To keep a continuous track of the progress of the teaching learning process the derived model has created a formal strategy. Migueis et al.[5] have applied data mining techniques to extract the hidden knowledge from the data which are of qualitative importance. Various aspects of education systems like identifying the slow learners and fast learners, deriving strategies for these learners, etc can also be micro-managed to improve the education system.

Altujjar *et al.,* [6] and Zhang *et al.,* [7] merged data mining and education system to proposed a novel term Education Data Mining (EDM). The huge amount of data generated in the educational institutes through the results of students, feedback and reviews of the stakeholders, etc have provided the motivation to implement EDM. The outcomes of these models have also encouraged the developing countries to frame their educational policies.

Pandey and Taruna [8] presented the adaptive technique for the teachers to change their strategies on the basis of the performance evaluation. The depth of data intelligence is explored by the authors to identify the hidden information in the data. Important aspects of EDM from the point of view of students by Thai-Nghe et al.[9]. They presented the benefits of EDM for the students for self evaluation and performance improvement through the analysis of their academic and non academic history to predict the future behaviour. The recommendation for the courses for any students could also be done using this approach.

Helal *et al.,* [10] have used the set of features like scores of high school courses, assignments, grades, etc and compared them with the evaluation sheet of instructors to verify the correctness of the model. To explore the other dimensions of the features analysis, the participation of students on social media and their psychological characteristics are also considered. The detailed collection of features has presented a more accurate estimation of academic performance of students. This in turn could be of use for the teacher's appraisal analysis also.

Recommender Systems and Collaborative Filtering

The recommender system is an intelligent model to drive the user experience and assist for decision making through the suggestions about the product. These recommendations are derived through the available information about various parameters

which are been considered by other users while doing the business in the same domain. The problem of recommendation may be formulated as $f : U \times I \rightarrow R$ where *f* represents the utility function, *U* and *I* represent the user space and item space respectively which comprise of the features or attributes of the users and items. *R* is the set of predicted ratings represented as non-negative numbers. It is generated through the projection of *f* over the combinations of users and items. The most optimal value of *u* represented by $u_j^* = \arg Max_{j \in I} f(u, i)$ will be the recommended item for a specific user *u*.

The recommender systems use collaborative filtering for recommendation framework due to its capability to utilize the ratings of other users for the predictions and recommendations. These ratings and reviews are aggregated and analyzed systematically to present a reasonable recommendation to the active user. It works on the principle of similarity of liking among the clusters of users. Collaborative filtering is classified into two categories: User-user CF and Item-item CF. Concept of classification in user-user CF is the similarity of the ratings of various users. It relies upon the behaviour of user and their orientation towards different items. It can be represented through the similarity function defined by $s : U \times U \rightarrow R$. However the time complexity of user-user CF suffers the problem of scalability in case of large number of users. On the other hand item-item CF utilizes the rating patterns of items and the respective similarities to predict the user's orientation towards the items. It is also found to be robust to the scaling issue and independent of the number of users. The similarity function derived in item-item CF is derived as $s : I \times I \rightarrow R$. Although both the methods of collaborative filtering are easy to implement and finds applications in various fields with reasonable accuracies, they are subject to some implementation constraints. User based method is found to be more suitable in the situation where the number of items are more than the number of users. However item based methods provide better performance in case where the number of users are more than the number of items. Item-Item CF is used in this research work for the teacher recommendation because the number of parameters used to evaluate the performance of the teachers is less than the number of teachers.

Proposed Methodology

The proposed work comprises of a recommender for teachers of an educational institution depending upon various attributes. These attributes are qualitative as well as quantitative. The nature of these attributes is random because of the behavioral dependency of the stakeholders in the process. Therefore a probabilistic framework using

Hidden Markov model is proposed in this paper. The HMM model is modified to make it adaptive in nature. The framework is continuously observed and parameters are modified on the basis of the error values. This way the model is made adaptive so as to deal with the operational dynamic uncertainties. A stochastic model is presented to resemble the time varying user preferences in terms of joint probability as

$$p(U,I) = \sum_Y p(Y)p(U|Y)p(I|Y) = \sum_Y p(U)p(Y|U)p(I|U) \tag{1}$$

It can be deduced from (1) that the occurrence of user and item within an observation space is independent event if the distribution of latent class *(Y)* is known for the observation space. This allows us to encode the entire preference of the user over the various items using the latent classes. The varying user preferences are mapped over the dynamic latent class model to derive the Hidden Markov Model (HMM). The overall HMM model is defined using various parameters like the initial state probability distribution for each user (π), transition probability table (A) and respective observation model. The initial state distribution model considered in this paper is derived as

$$\sum_u \sum_n p(Y_u^1 = n | X; \Gamma^{n-1}) \log \pi_n \tag{2}$$

Where Γ^{n-1} is the parameter estimation of previous iteration, Y_u^1 represents the latent estimate of uth user at first iteration and π_n is the probability distribution for nth iteration. $p(Y_u^1 = n | X)$ represents the summary statistics of the posterior distribution. Similarly the transition model derived in this work is given by

$$\sum_u \sum_{t=2}^T \sum_i \sum_j p(Y_u^{t-1} = i, Y_u^t = n | X; \Gamma^{n-1}) \log A_{ij} \tag{3}$$

where *t* resembles to the transition instance. The respective observation model is given by

$$\sum_u \sum_{t=1}^T \sum_j p(Y_u^t = n | X; \Gamma^{n-1}) \log p(N_u^t) \tag{4}$$

The three models may now be independently tuned to derive the maximum likelihood estimation. The overall HMM model is derived by adding (2), (3) and (4) which transforms the problem into an estimation of Maximum-a-Posteriori (MAP) estimates. Bayes' theorem can be used further to deduce the maximum posterior distribution. It also resolves the issue of over-fitting of the model with the outliers of the small training

samples. The final prediction can be performed using the fine tuned observation model as given in (4). The parameters of the derived HMM model is then optimized using the particle swarm optimization. PSO is an evolutionary algorithm based on stochastic method where each particle is representing the possible solution for the HMM parameter optimization. The parameters are moved in the space after each iteration and the process continues till the best possible solution is not attained. The final solution is considered as the optimal weights of the HMM framework.

The optimal solution in PSO is derived through the following folmulation:

$$v[] = W \times v[] + c_1 \times r \times (p_{best}[] - present[])$$
$$+ c_2 \times R \times (g_{best}[] - present[]) \tag{5}$$

And $present[] = present[] + v[]$ (6)

Here $v[]$ represent the weight vector, W is the inertia weight, c_1 and c_2 are the acceleration constants. P_{best} and g_{best} represent the individual extremes and global extremes of the algorithms respectively. Variables r and R are the random numbers ranging from 0 to 1. The weights calculation is done iteratively on the basis of present solutions.

The overall algorithm used in the proposed HMM based teacher recommender system shown below in algorithm 1.

Algorithm 1: HMM based Recommender system Algorithm

1. Collect the user data and Item data for the complete time T.

2. Initialize the model parameters π, A, Γ .

3. Compute the values of initial state distribution using the model given in (2)

4. Evaluate the transition model using (3)

5. Tune the observation model given in (4) through MAP estimates and modify the weights.

6. Derive the final estimates through the PCO model

Experiment Analysis

The performance of the proposed recommender system was evaluated using the real time data of the teachers and other stakeholders from an educational institute. Various attributes of the teachers are collected as primary parameters like Job_skills (Qualification_ID, Exp_ID, Level_ID), User_skills (User_qualification, User_Exp), Research publications, etc. Some secondary parameters like feedback, ratings, student's marks, etc are also considered. The evaluation is performed for 4 teachers over these 10 parameters. The data is collected from over 1000 students and is converted into a large dataset. The qualitative features like the soft skills, communication skills, sensitivity, extracurricular

aptitude is also considered while creating the dataset. The dataset is the used to train the proposed HMM based recommender system. The outcome of the proposed model consists of three classes, primary teaching, secondary teaching, higher secondary teaching, college teaching. The recommender system is expected to generate the outcome on the basis of these training attributes and should be able to classify that the respective teacher should be recommended for which level of teaching. For example, a teacher with doctoral degree, rich experience and good publication should be recommended for college teaching, but a teacher with graduate degree should be classified as a secondary or higher secondary teacher. The classes and the respective decision making however, is not a straight forward simple problem. It is indeed a very complex problem in nature due to the time changing behavioral attributes. The performance of the proposed model is evaluated in terms of various metrics like accuracy, precision and recall. It is also compared with the performance of some conventional recommendation frameworks like content based filtering, cost sensitive Collaborative filtering and hybrid recommender. Table 1 shows the comparative analysis of various techniques and shows that the proposed recommender is providing a better performance.

Table 1: Performance Comparison

Technique/metrics	Accuracy	Precision	Recall
Content based filtering	0.473	0.060	0.679
Cost sensitive Collaborative filtering	0.921	0.143	0.132
Hybrid recommender	0.509	0.089	1
Proposed Recommender	0.965	0.150	0.135

Conclusions:

A recommender system for teachers is proposed in this paper using the HMM framework to deal with the probabilistic distribution of the attributes. The recommendation is proposed on the basis of various primary and secondary parameters which directly and indirectly governs the characteristics of the teacher entity. The parameters like job skills required, user skills attained, research publications, feedbacks, ratings, soft skill, communication skills, students' assessment, etc have been considered in this work to evaluate the class of the teacher. The classification is made under the decision base including the primary level, secondary level, higher secondary level of college level teaching. The parameters of the HM model are optimized using the PCO algorithm to attain

the best recommendation solutions. The HMM framework is made adaptive by tuning the weights with reference to the error. The performance of the proposed technique is evaluated in terms of parameters like accuracy, precision and recall. It is also compared with the other conventional techniques and found to be performing better than those techniques.

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AN ENVIRONMENT OF GENDER EQUALITY: INDIAN WOMEN IN ENVIRONMENTAL MOVEMENTS

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Abstract:

As awareness of the environmental crisis grows, there is a heightened emphasis on women as catalysts for positive change (1). Ecofeminism delves into the intimate connections between women and nature, shedding light on the parallel struggles of both in the face of exploitation and injustice (2). The researchers have attempted to understand the eco-gender gap and review the role of Indian women in environmental movements and the need to involve and increase the representation of women in roles related to biodiversity and environmental governance at all levels.

Keywords: Ecofeminism, Environmental Conservation, Sustainability, Eco-gender gap, Environmental Movements

Introduction:

Women play a significant role in the prosperity and sustainable progress of their communities and nations, as well as in the preservation of the earth's ecosystems, biodiversity and natural resources. Despite constituting a majority, women bear the responsibility of providing nourishment to a significant portion of the world's population, particularly in rural areas of developing countries (3). Women are also leaders in environmentalism. They have been a constant voice in the fight for environmental justice over the years, one that cannot be ignored or silenced. India is known as the mother of nature, the contradiction between worshipping nature and the enforcement of technology and science in India has caused nature to pay the cost (4). Individualization of responsibility can go far beyond, while individual action is important too. We have to look at the big picture and do something at the societal level. Despite its value, researchers often fail to study the role of local women and their knowledge in conserving an environment, automatically regarding it as insignificant which is addressed in this study (5).

Objectives of the Study

- To study the relationship between women and the environment.

- To identify the eco-gender gap and critical barriers to gender equality.
- To review the role of Indian women in environmental movements to understand the need for gender equality in environmental conservation.

Review of Literature

The potential for women to lead in the preservation and stability of the ecosystem is evident due to their significant involvement in the management of natural resources (6). Women must be involved equally and actively in procedures to conserve and sustainably use biodiversity because they play essential roles as main land managers and resource users, and they suffer disproportionately from both environmental degradation and gender-blind conservation efforts (7). Women have more environmentally sensitive attitudes and knowledge than men (8). Most women, particularly in rural areas, are active in household chores such as food, water, fodder and fuel gathering, which increases their awareness of the environment and enables them to implement suitable conservation practices and technology (9). Thus, women actively participate in environmental protection more than men as women are directly affected and influenced by nature than men (10).

Research Methodology

The researchers have adopted a qualitative approach using thematic analysis and the concept of Ecofeminism. Thematic analysis (TA) is a method for identifying, analyzing and interpreting patterns of meaning ('themes') about people's views, opinions, knowledge, experiences or values from a set of qualitative data (11, 12). The theory of Ecofeminism is based on the profound and interconnected relationship shared between women and the environment, and bridges ecological ethics and feminism, to uncover the conceptual links between environmental degradation and sexist oppression (13). This study is based on secondary data obtained from books, publications from national and international journals, Government Websites, Government reports, official websites and digital newspapers, thematically analyzed to identify the eco-gender gap and review the role of Indian women in environmental movements to understand the importance of involving women in environmental conservation applying the theory of ecofeminism.

Environmental Issues are Women's Issues

Environmental issues are inherently intertwined with women's issues. The depletion of natural resources and environmental degradation directly impact women's time, income, health and social support systems (14). They often face increased vulnerabilities, including limited access to clean water, food insecurity and health risks.

While environmental degradation affects all human beings, women are particularly considered the primary victims. Their direct involvement with the environment has granted them profound knowledge about it (15). Consequently, they are more likely to experience the consequences of a degraded home, neighborhood and environment. Moreover, women are crucial agents of change in sustainable development and environmental conservation.

The Eco-Gender Gap

A direct link has been established between the act of donating to environmental exploitation and the exploitation of women within society by men, indicating an intensified connection with the advent of modernity in Indian society (16). Women tend to have a stronger affinity to nature, while men to culture. Given the environmental damage caused by men's control over women and women's significant engagement in environmental sustainability, some have hypothesized that women might better conserve the Earth if in power (17). Men regarding women and nature as subservient beings, implies a close affiliation between them (18). Women around the globe are underrepresented in decision-making roles related to environmental and sustainable development challenges. Within a labor-intensive and non-monetized economy, women find themselves vulnerable to exploitation by profiteers, middlemen and even men within their own families (19). Critical gender gaps that present barriers to sustainable environment management are stereotypical gender roles, access to education and resources, unequal and insecure property rights, unpaid and underrecognized work, wage gap, underrepresentation in natural resource decision-making and leadership and gender-based violence (20). It is important to generalize care and not see it as just a maternal trait but rather a wider compassion for each other and all other beings (21).

Women in Environmental Movements of India

1. Bishnoi Movement – 1731 AD

The 'Khejarli Massacre,' where Bishnoi people of Rajasthan used *Chipko* (means embrace) techniques against tree chopping in 1731, marked the beginning of Indian women's direct concern for environmental conservation (22). The Marwar Maharaja Abhay Singh's decision to cut down Khejri trees, which the Bishnois venerated, for a new fort marked the beginning of the movement. Amrita Devi led the locals in a new form of resistance as they resisted the order while she clutched the tree (23). For defying a royal edict, Amrita Devi and her three daughters were beheaded. When 363 Bishnois died using a

non-violent approach, the Maharaja forbade harm to trees and animals and designated the Bishnoi state as a protected area.

2. Chipko Movement - 1973

Initiated in the Garhwal division of Uttar Pradesh, Chamoli District, was a grassroots protest led by Chandi Prasad Bhatt (24) advocating the slogan 'ecology is the permanent economy.' Sunderlal Bahuguna, Bachni Devi, Gauri Devi and the women of the Garhwali area played pivotal roles in saving trees by embracing them in a non-violent protest (25). Rural women, under the leadership of Bachni Devi, saved the Adwani Forest through their determined efforts. They formed the *Mahila Mandal* to protect the forests, understanding that forest degradation directly impacted their lives and survival.

3. Appiko Movement – 1983

The Appiko movement in Karnataka aimed at safeguarding the Western Ghats forests. Initiated by Panduranga Hegde, the residents of Salkani village in the Western Ghats, took part in 'hugging the trees' in the Kalase forest (26) in response to the government's policy of opening up the forest for industrial development. The movement garnered participation from men, women and children who united to protect the pristine forest. Notable involvement from the *Mahila Mandal*, including *Adivasi* women, joined forces to advocate for the preservation of the rainforest (27). The strong and united protests forced the government to reconsider its industrial policy, ultimately leading to the suspension of destructive activities harmful to the forest (28).

4. Save Silent Valley Movement - 1978

Led by Malayalam poet and environmentalist Sugatha Kumari against the construction of a dam for hydroelectric project across the Kunthipuzha River which would submerge the entire moist evergreen forest (29). Several NGOs opposed and urged the government to abandon the project. In January 1981, PM Indira Gandhi declared that Silent Valley will be protected and in 1985, Rajiv Gandhi declared the Silent Valley National Park.

5. Jungle Bachao Andholan - 1982

The Jungle Bachao Andolan began in Bihar and later spread to states like Jharkhand and Orissa. The tribals of Bihar's Singhbhum district erupted in protest when the government sought to replace natural sal trees with expensive teak, a move dubbed 'a greed game, political populism.' This movement also spread to Jharkhand and Orissa (30).

6. Navdanya Movement - 1984

The Navdanya movement is India's largest organic movement as a program under the Research Foundation for Science, Technology and Ecology (RFSTE) to provide direction

and support to environmental activism (31). Vandana Shiva has always had an advantage in fights against authorities be it empowering women or anti-globalisation campaigns. *Navdanya* (nine crops) represents India's collective source of food security to safeguard seeds from biopiracy, leading to the creation of 111 community seed banks across 17 states in India (32). The movement actively opposes Genetically Modified Seeds and is actively engaged in biodiversity conservation (33). Comprising predominantly women farmers from various regions, the movement promotes organic farming and preserving traditional agricultural practices.

6. Narmada Bachao Andholan (NBA) - 1985

Led by Medha Patkar, Baba Amte and Arundhati Roy, an international protest gained support from NGO's around the globe. A protest for not providing proper rehabilitation and resettlement for the people displaced by the construction of the Sardar Sarovar Dam (34), turned into a movement with focus on the preservation of the environment and ecosystems of the valley. In October 2000, the Supreme Court approved a height of 90m against the proposed 130m for the dam. The NBA has created an anti-big dam opinion in India and outside questioning the paradigm of development (35).

7. Save Ganga Movement – 1998

In 1998, Rama Rauia initiated the Save Ganga commitment with a conference on '*Ganga aur Humara Daayitva'* in Kanpur, recognizing the need for a statewide collective commitment to the cause as well as a holistic solution to the river's various challenges. The National Women's Organization of Pune was founded in 1998 primarily to further this great objective (36).

Conclusion:

Women play an important role in environmental development and management. Through these initiatives, history has shown how women have played an important role in effectively conserving and protecting the environment (37). Their full participation is, therefore, essential for achieving sustainable development. Women, particularly those who live in rural or mountainous places, have a unique relationship with the environment. Beyond equity, enabling women's full engagement in environmental decisions is critical to ensure that environmental conservation and sustainable use are successful in the long term. Women's specialized roles and duties within the household, community and society contribute to the development of unique environmental knowledge formed by their own demands and objectives. They are thereby in a unique position to bring different perspectives and new solutions to addressing environmental concerns.

Women may preserve energy resources significantly more efficiently than men with sufficient environmental education and understanding (38). Recognizing the linkages between environmental and gender concerns is essential for addressing these interconnected challenges and promoting inclusive and equitable solutions. By empowering women, amplifying their voices and ensuring their active participation, we can build a more resilient and sustainable future for both women and the environment. For the sake of future generations, therefore, their voices must be fully included in policy-making and implementation activities at all stages.

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BEYOND THE CLASSROOM: SOCIAL CONSTRUCTIVISM AND THE SOCIALIZATION OF LEARNERS

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Abstract:

The social constructivist theory of Lev Vygotsky is applied to analyze how students socialize outside of the conventional classroom. Vygotsky maintained that learning is essentially a socially mediated process and highlighted the critical role that social contact plays in cognitive development. His ideas on scaffolding and the Zone of Proximal Development (ZPD) highlight the value of teamwork and supervised engagement in developing students' abilities. The study looks at how informal learning environments, like peer relationships, community involvement, and online platforms, provide rich socialization contexts that develop critical thinking, problem-solving, and cultural awareness. It emphasizes the dynamic interaction between students and their sociocultural surroundings, reflecting the fact that knowledge formation comprises both collective experiences and individual cognition. We will understand the relationship between social constructivism and socialization beyond the classroom which offers several important implications for educators and policymakers. And also, as a part of their intellectual, emotional, and social development, students must socialize in real- world situations.

Keywords: Social Constructivist, Team Work, Supervised Engagement, Community Involvement, Environment, Surroundings, Individual Cognition, Educators.

Understanding the Roots of Social constructivism through Vygotskian way

Lev Vygotsky's definition of social constructivism emphasizes how social interactions and cultural resources, especially language is used to create knowledge in a social context. According to Vygotsky, "Every function in the child's cultural development appears twice: first, on the social level, and later, on the individual level; first, between people (interpsychological), and then inside the child (intrapsychological)" (Vygotsky, 1978). He emphasized language's function as a basic tool for thoughts and acting as the main medium for social interaction. He believed that social interaction was essential to the development of cognition. Within the Zone of Proximal Development (ZPD), which is the

range of actions a learner may accomplish with assistance but not yet by their own, he maintained that higher mental processes develop through mediated learning experiences with more competent people, such as classmates, teachers, or parents (Vygotsky, 1978).

Inportant Aspects of Vygotsky's Theory That Encourage Knowledge Co-Construction

Zone of Proximal Development (ZPD):

One of the key components of Vygotsky's theory is his notion of the ZPD. It describes the variety of tasks that a student can complete with the direction or help of a more knowledgeable person (MKO), like a teacher, peer, or adult, but is still unable to complete on their own. The ZPD emphasizes how learning is a social activity that relies on group collaboration to solve issues and increase understanding rather than being an isolated endeavour (Vygotsky, 1978). Example: A young student learning arithmetic may find it difficult to finish the problem on their own. But with an instructor's help, the young learner may solve the puzzle and comprehend how it was solved. By offering support and then progressively lowering it, the teacher's scaffolding aids the child in transitioning from needing help to being able to tackle comparable situations on their own (Wood, Bruner, & Ross, 1976).

Social Interaction as a Mechanism for Learning:

According to Vygotsky, social interactions are the origin of all higher cognitive functions, which an individual then internalizes. This indicates that learning occurs first on a social (inter-psychological) level and subsequently internalizes on an individual (intra-psychological) level (Vygotsky, 1978). People learn from one another and construct knowledge through discussion, inquiry, and cooperative problem-solving techniques.As an example, during a group discussion about a historical event, students may contribute insights based on their prior knowledge or cultural backgrounds, as well as a variety of opinions and views. They jointly create a more complex interpretation of the incident as a result of their interaction. Beyond what any one of them may have learned on their own, each student adds to the learning of others (Mercer, 2000).

Language as a Tool for Co-Construction:

Vygotsky believed that language was the main instrument for learning and thinking. Through dialogue and conversation, it helps people express their ideas, share their information, and deepen their understanding, all of which contribute to the mediation of cognitive development (Vygotsky, 1978). Since language enables students to discuss concepts and negotiate meaning, it is essential to the process of co-constructing knowledge.

Example, when doing an experiment in a science class, students collaborate and use language to discuss observations, forecast outcomes, and formulate hypotheses. Through this collaborative method, students' grasp of the scientific topics deepens and evolves as they work through their ideas and get feedback from their teacher or peers (Mercer, 2000).

Scaffolding:

Another key idea in Vygotsky's theory is scaffolding. It describes the short- term assistance an MKO offers to a learner to help them go through their ZPD. With the use of scaffolding, students are able to complete tasks that they could not complete on their own. Support is gradually reduced for learners as they gain competence, enabling them to work on their own (Wood, Bruner, & Ross, 1976). As an example, a tutor assisting a student with essay writing may first offer an overview, make recommendations, and help the student organize their points of contention. The tutor takes a more detached role as the student gains proficiency, urging the student to assume greater accountability for their work. After co-constructing the necessary abilities through supervised engagement, the student is ready to organize and compose essays on their own.

Dialogic Teaching and Learning

According to Vygotskian theory, discourse is essential to the process of cognitive growth. According to Vygotsky, knowledge is created by interaction with others, especially those who possess greater information than oneself, like peers, teachers, or mentors (Vygotsky, 1978). Learning is intrinsically social. By engaging with the viewpoints and advice of others, this back-and-forth interchange of ideas, also known as "dialogic interaction," enables learners to assimilate new concepts and tactics. Through discussion, students are exposed to concepts and linguistic patterns outside of their Zone of Proximal Development (ZPD), as defined by Vygotsky. In this area, conversation acts as a support system for the learner's growth, assisting them in progressively becoming more independent thinkers (Mercer & Littleton, 2007). Thus, dialogue is not just a means of communication but a transformative tool that shapes understanding and fosters cognitive growth.

From Social Speech to Inner Speech

Lev Vygotsky believed that one of the most important phases of language and cognitive development is the shift from social to internal speech. According to him, children's cognitive development is influenced by their interactions with the social environment, especially when it comes to speaking with other people. Speech is initially

social and external, utilized for participating in group activities and interacting with others. This "social speech" helps to communication with others and solves problems outside of oneself. Language takes on a more personal role as children internalize it over time, becoming "inner speech." According to him, this inner speech is the basis of thought itself and enables people to solve problems internally, regulate themselves, and guide themselves without the help of outside communication. According to him, this internalization goes beyond simple reduction. According to him, this internalization is a fundamentally distinct type of cognitive processing rather than just a reduction of external speech. Internalization causes external speech to become more fragmented and shortened, frequently losing the complete grammatical structure of social speech, yet it still serves the vital purpose of structuring and directing cognition. This change emphasizes how social contact serves as the foundation for cognitive growth, implying that the initial social use of language and its later internalization are the sources of the capacity for critical and abstract thought.

Social Environments: Formal and Informal Social

Interactions and Their Role in Socialization

1. Community Base Learning

Learning experiences that take place in community settings, frequently outside of traditional classrooms, are referred to as community-based learning. It places a strong emphasis on using knowledge in real-world situations through active community involvement. A few examples like service learning, community engagement, local cultural experiences are voluntary labor (Eyler & Giles, 1999).

- **Service learning:** It encourages students to utilize what they have learned in the classroom to solve problems in the community by combining academic studies and community service. In these situations, social connection promotes civic engagement, empathy, and teamwork (Jacoby, 2003).

- **Community Engagement**: Outside the family and peer interactions, community engagement plays a significant role in socializing learners. Community centers, sports teams, and religious or cultural organizations offer opportunities for social and cognitive learning. These environments provide learners with the opportunity to engage in culturally relevant practices, participate in group decision-making, and contribute to the community. Through these activities, individuals internalize societal roles, enhance social skills, and develop a sense of identity. And also help

the community to directly interact with people in the community and hone their leadership, problem-solving and communication skills (Lave & Wenger, 1991; Putnam, 2000).

- **Local Cultural Experiences:** People get introduced to the values, customs, and identities of their community when they participate in local cultural activities, festivals, and traditions. Through the provision of authentic contexts for comprehending social norms and cultural expectations, these encounters augment social learning. People learn how to become contributing members of society and learn communal values through this interaction. Effective socialization requires the teaching of social responsibility, teamwork, and a sense of belonging, all of which they impart (Cole, 1996; Vygotsky, 1978).

2. Family and Peer Influence

- **Family Dynamics and Learning**: The family unit is often the first site of socialization and knowledge construction. Children pick up on fundamental cultural values, social conventions, and appropriate behavior through their interactions with parents, siblings, and extended relatives. Through interactions with family members, children not only learn language but also internalize cultural values and behavioral norms. Family members act as role models, influencing beliefs about gender roles, authority, and interpersonal interactions. These informal interactions lay the foundation for cognitive and emotional development, forming the base for later academic and social learning. Social constructivism suggests that children construct knowledge in collaboration with caregivers, even in seemingly mundane interactions, such as storytelling, play, or daily routines (Berk, 2013; Bruner, 1996; Vygotsky, 1978).

- **Peer Interaction and Cognitive Development**: As kids become older, peer groups play a bigger role in helping them socialize. Peers give people a place to try out new social skills, make friends, and create group identities. Peer groups provide a unique space for learners to engage in social constructivism outside the classroom. According to Vygotsky, peers can act as both a source of scaffolding and a zone for collaborative learning. Group activities, such as problem-solving tasks, social games, and even online collaboration, provide students with opportunities to share knowledge, challenge assumptions, and develop cognitive skills through social interaction. Peer-mediated learning allows for diverse perspectives and can

promote critical thinking in ways that teacher-centered instruction cannot always achieve (Vygotsky, 1978; Corsaro, 2015).

- **Social networks:** In the present day, digital social networks create virtual places for social interaction and allow peer influence to transcend geographical barriers, exposing people to a variety of viewpoints and cultural norms. Peers and family help people learn how to interact with others in a variety of social contexts, how to speak well, and how to conform to or defy social norms. One's perception of authority, interpersonal identity, and group dynamics are frequently shaped by these early experiences (Boyd, 2014; Jenkins, 2006).

3. Cultural Practices as Learning Spaces

Customs, traditions, and rituals provide unstructured learning environments. These customs are ingrained in communities and frequently work as organic channels for the transmission of information, social standards, and shared values.

- **Traditional Knowledge:** Moral lessons, historical information, and survival skills are frequently imparted through cultural traditions including storytelling, crafts, and rituals. These are important teaching moments when people, especially kids, discover the social background and history of their community. People can better understand their place in a broader cultural context by taking part in cultural events like religious festivals or rites of passage. These encounters also present chances to observe and put into practice societal standards like deference to elders or gender roles (Ortner, 1984; Cole, 1996).

- **Language and Communication:** Language has a central role in many cultural activities. People learn how to communicate properly within their cultural environment through casual discussions, oral traditions, and linguistic nuances. This includes humor, narrative strategies, and politeness. These cultural learning environments support the passing down of social norms and values from one generation to the next. They provide relaxed yet organized environments where people can discover more about their background, build an identity, and find their role in the community (Bourdieu, 1991; Vygotsky, 1978).

Learning Beyond Traditional Classrooms

Using Critical pedagogy, Group and Guided Discussions, Role plays, Case studies methods teacher can work on socialization and thereby developing critical consciousness among students. Here,

Critical Pedagogy

Involve students in decisions about classroom norms, curriculum content, and activities. Ensure that every student's voice is heard and valued in the classroom, creating an environment where students feel safe and respected to share their ideas. Integrate discussions about social justice, human rights, and equity into the curriculum. Connect classroom discussions to real-world activism or community engagement projects. Encourage students to take what they learn and apply it to address local or global issues. Create opportunities for students to engage in meaningful, open dialogue on issues that affect their lives and communities. Teach students to ask critical questions about the world around them.

Group and Guided Discussions

By promoting collaborative learning, group and facilitated conversations are effective strategies for promoting socialization outside of the classroom. Create an environment that relates content to real-world scenarios, teacher can encourage friendly, nonjudgmental surroundings to increase involvement and trust. Teacher will design activities where students should engage in problem-solving or debate related to their subject. For example, in a social movement history lesson, students could be divide into smaller groups to conduct research and act out scenarios as activists from various viewpoints. The teacher guides the discussion with thought-provocative questions, it will help students to connect historical events to modern social problems in society. This method improves empathy, teamwork, and communication in addition to deepening comprehension of the material.

Role Play

Teachers should provide open, encouraging environments where students feel free to try out new roles in order to encourage an environment that supports. A language class might, act out a marketplace, with students assuming the roles of shoppers or shopkeepers, allowing them to practice communication in an entertaining and real-world context. In order to enable students, simulate delicate social interactions, the curriculum should be based on real-life scenarios that are relevant to the subject matter. Methods that facilitate problem-solving, empathy, and peer collaboration include group role-playing, collaborative storytelling, and the use of technology to generate virtual role-play scenarios.

Case Study Method

The case study technique is a powerful tool for supporting socialization outside of the classroom because it exposes students to real-world situations that promote teamwork, critical thinking, and problem-solving. Teachers can encourage this by creating an environment where students are comfortably communicating with other viewpoints through group discussions or online resources. Content may include in-depth case studies of historical events, corporate difficulties, or societal issues, encouraging group analysis and discussion. A case study on climate change policies, could encourage deeper understanding and social interaction by involving students in discussions, research, and role-playing exercises. Methods such as role-playing, group projects, and peer review are important to this method because they guarantee that each participant actively participates in the learning process, which promotes both academic development and interpersonal communication.

Applications for Educators and Policy Makers

Understanding the relationship between social constructivism and socialization beyond the classroom offers several important implications for educators and policymakers.

- **Holistic Learning Approaches:** Teachers need to understand how informal learning environments influence students' social and cognitive growth. By incorporating peer cooperation, community-based learning, and family involvement into their instructional practices, schools can go beyond the limits of typical classroom settings.

- **Leveraging Technology:** Teachers should try to figure out how to support social learning in online environments since digital tools have a growing impact on students' learning. These resources can facilitate group projects, peer review, and international exchanges that are consistent with social constructivism's concepts.

- **Cultural Sensitivity:** Learning environments should be taken into account in educational programs. Contextually relevant and inclusive educational experiences can be produced by acknowledging the importance of family, community, and cultural practices in the development of knowledge.

- **Encouraging Social and Emotional Learning:** Socialization plays an important role for the development of social competence, empathy, and emotional intelligence along with academic success. Incorporating social and emotional learning (SEL) into

educational frameworks is necessary to ensure that children develop into thoughtful, involved, and caring members of society

Future Directions: Expanding Social Constructivism Beyond the Classroom

Embracing Hybrid Learning Models

Expanding social constructivism appears to be possible through hybrid learning approaches, which combine community-based and classroom-based learning. This method promotes socializing as well as intellectual learning by combining formal education with practical experiences. Partnerships between educational institutions and nearby communities, for example, can establish experiential learning settings where students apply abstract ideas to real-world scenarios, strengthening their ability to solve problems and work with others. In order to further encourage social interactions, learning can also take place virtually. Students can participate in online forums, groups, or simulations that imitate real-world situations. With the help of hybrid models, students are better equipped to adjust to and work with a variety of groups in real-world situations by being encouraged to interact with a variety of social environments (Hickey *et al.,* 2020).

Adapting to a Globalized World

Globalization requires a shift in social constructivist models to incorporate cross-cultural understanding and global awareness. Socialization in the 21st century transcends local or national boundaries, necessitating learners to engage with diverse perspectives. Programs that encourage international collaborations, virtual exchange programs, or global learning networks can facilitate such interactions. For instance, students in one country could work on projects with peers from another, learning not only subject matter but also the social skills necessary to navigate cultural differences. This fosters empathy, cultural competence, and global citizenship. Incorporating global issues such as climate change, social justice, and technology ethics into the curriculum can also push learners to think critically about their roles as global citizens (Dewey, 2017).

Innovative Practices

New technologies present fresh chances to use social constructivism outside of conventional educational contexts. Through interactive simulations where they must cooperate, solve puzzles, and consider several viewpoints, learners can be fully immersed in virtual reality (VR) and augmented reality (AR) environments. Virtual reality has the potential to improve students' social skills and material knowledge by immersing them in future scenarios or historical settings where teamwork is required to overcome obstacles.

Social media and mobile platforms help students connect through group projects or common interests, which can support peer learning in casual circumstances. Through the integration of game design components such as leaderboards, challenges, and awards, gamification approaches can also foster student engagement in learning communities, thereby integrating social interactions into the learning process. Makerspaces, public libraries, and youth centers are examples of community spaces (Anderson, 2019).

Conclusion:

The social constructivism theory of Lev Vygotsky offers an entire framework for understanding how language, cultural practices, and social interactions all contribute to the co-construction of knowledge. His understanding of scaffolding, the Zone of Proximal Development (ZPD), and the critical role social contact plays in cognitive development underscores the transformative potential of group learning. According to him, learning is fundamentally social, with students first internalizing information through conversations with more experienced people before doing so on their own. Through this process, which uses language as an essential mediation tool, students can develop their cognitive capacities, solve issues, and think critically.

The use of Vygotskian concepts in formal and informal learning contexts, from peer collaboration to family interactions and community-based learning, illustrates the wide-ranging applicability of social constructivism in practical contexts. We can create environments that encourage critical thinking and socialization by pushing educators to adopt dialogic teaching, cooperative problem-solving, and culturally appropriate learning. Knowing the importance of family dynamics, cultural customs, and social networks in education can provide insightful viewpoints on how knowledge is formed in various environments.

In the future, there will be exciting potential for education as social constructivism is expanded through hybrid learning models, international collaborations, and modern technologies. The capacity to interact with people from different backgrounds and adjust to different environments will be essential for kids' development as the globe grows more interconnected. We may promote not simply academic achievement but also the social and emotional skills necessary for children to achieve success in a complex and linked world by incorporating Vygotsky's theories into educational methods.

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SOCIAL MEDIA AND MENTAL HEALTH AMONG ADOLESCENTS: A LITERATURE REVIEW

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Abstract:

In today's digital age, social media has a profound influence on adolescent mental health, both positively and negatively. This literature review analyzed over 20 scholarly articles (ranging from 2012 to 2024) to explore the impact of social media on adolescent well-being. The review highlighted both the benefits and risks associated with social media use, with particular attention to issues like social comparison, cyberbullying, body image dissatisfaction, and addiction. On the positive side, social media provides platforms for self-expression, emotional support, and community building, contributing to a sense of belonging among adolescents. However, it also fosters unrealistic comparisons, exacerbates anxiety and depression, and can lead to social isolation. The findings suggest that social media use can enhance adolescent mental health if used positively, but excessive use and negative online interactions can have detrimental effects. The paper concluded by emphasizing the need for balanced social media engagement and suggested further research on effective strategies for mitigating its negative impact on adolescent mental health.

Keywords: Social Media, Mental Health, Adolescents

Introduction:

The advent of social media has fundamentally transformed the way adolescents interact, communicate, and perceive themselves and others. With platforms such as Facebook, Instagram, and Snapchat becoming integral parts of daily life, understanding their impact on mental health has gained paramount importance. Adolescents, who are particularly vulnerable to the influences of social media, often engage in online activities that can either enhance or undermine their psychological well-being.

Social media encompasses digital platforms that facilitate the creation, sharing, and exchange of information, ideas, and multimedia content, fostering virtual communities and networks. These platforms, such as LinkedIn, Twitter, Instagram, and YouTube, enable users to communicate and engage in real-time interactions, promote connectivity, and

allow for the dissemination of user-generated content. Social media has become a vital tool in both personal and professional contexts, impacting communication, marketing, and information sharing across diverse sectors globally.

Recent studies suggest that social media can create environments that foster unrealistic comparisons, leading to feelings of inadequacy and lower self-esteem among users. The juxtaposition of curated online identities against real-life experiences can exacerbate issues like anxiety and depression, particularly during the formative years of adolescence. However, social media also holds the potential for positive outcomes, such as enhanced social support, improved self-expression, and the formation of meaningful connections.

This literature review aims to synthesize existing research on the relationship between social media use and mental health in adolescents, highlighting the dual nature of these platforms. By examining various studies, the review seeks to identify patterns, discrepancies, and implications for future research and interventions. The insights gained from this review will be crucial for parents, educators, and mental health professionals working to navigate the complexities of social media's role in adolescent development and well-being.

Pros of Social Media

Social media can offer numerous benefits to adolescents, especially in the areas of social support and self-expression. One of the most notable advantages is the ability for adolescents to connect with others, providing opportunities for emotional support and the sharing of experiences. For many, this is particularly beneficial when they feel isolated or disconnected in their offline environments, such as in rural areas or among marginalized groups. Additionally, platforms like Instagram, YouTube, and TikTok allow for creative self-expression, where adolescents can share their talents, thoughts, and personal stories. This creative outlet can boost self-esteem, help them find their voice, and reinforce their identity during a critical stage of personal development.

Moreover, social media can foster a strong sense of belonging. By joining online communities or groups based on common interests, adolescents can find like-minded peers, which can be particularly important during the adolescence years, when establishing a sense of identity is key. These interactions can help adolescents feel accepted and valued, reducing the feeling of loneliness that may come with offline social challenges. Social media also provides easy access to mental health resources and information, which can be

instrumental in raising awareness, reducing stigma, and promoting help-seeking behaviors among adolescents. For example, there are support groups and mental health influencers who openly discuss mental well-being, encouraging young people to seek help if needed. Furthermore, positive peer influence on social media can encourage adolescents to adopt healthy coping mechanisms and provide support during difficult times.

Cons of Social Media

Despite its potential benefits, social media also carries several risks for adolescent mental health, often leading to negative emotional outcomes. One of the most significant drawbacks is the tendency for adolescents to engage in social comparison. As they scroll through their feeds, they are exposed to curated, idealized versions of other people's lives, which often leads them to measure their own worth against these unrealistic portrayals. This can create feelings of inadequacy, anxiety, and low self-esteem, as adolescents feel they don't measure up to the perfection they see online.

Another major concern is cyberbullying, which has become a prevalent issue on many social media platforms. Adolescents who experience bullying or harassment online can suffer from elevated levels of anxiety, depression, and even suicidal thoughts. The anonymity and detachment provided by social media can embolden bullies, making it more difficult for victims to escape the harmful effects. Additionally, the constant exposure to unrealistic beauty standards and body image ideals on social media can exacerbate body dissatisfaction, particularly among young people who are still forming their self-image. Adolescents may feel pressured to conform to these unattainable standards, which can lead to anxiety, eating disorders, and depression.

Social media addiction is another concern. The constant need for validation through likes, comments, and shares can lead to excessive use, which can disrupt sleep patterns, decrease academic performance, and cause emotional exhaustion. This addiction to digital devices may replace face-to-face interactions, leading to social isolation and loneliness. In addition, the pressure to maintain an idealized online persona can cause stress and anxiety, particularly when adolescents feel that their real-life selves don't measure up to their curated online images. This disconnect between online and offline personas can lead to a diminished sense of self-worth and psychological fatigue, making it harder for adolescents to cope with real-life challenges.

Literature Review

Taylor (2024) explored the relationship between social media use and body image dissatisfaction in adolescents. The research indicated that adolescents exposed to fitness influencers and idealized body types on platforms like TikTok and Instagram were more likely to develop negative body image perceptions and disordered eating behaviors. The study further emphasized how constant exposure to 'ideal' body standards, coupled with frequent social comparison, contributes to the development of eating disorders. Sullivan & Chan (2024) corroborated these findings, suggesting that these impacts are particularly significant in adolescent girls, who often face more societal pressure regarding appearance. Clark & Zhang (2024) conducted a longitudinal study examining the long-term effects of social media on adolescent anxiety and found that prolonged exposure to social media, especially through platforms that emphasize visual content (like Instagram and Snapchat), contributed to increased anxiety symptoms in adolescents. Found that the pressure to maintain a curated online image led to heightened self-consciousness and insecurity, particularly in adolescent girls.

Barker & Lee (2023) investigated the relationship between cyberbullying on social media platforms and adolescent emotional well-being and found that adolescents who experienced cyberbullying were more likely to suffer from long-term psychological effects, including anxiety, depression, and suicidal thoughts. Also noted that social media platforms' lack of adequate regulation exacerbated these issues. The study further recommended stricter measures to protect vulnerable adolescents online, particularly on platforms known for higher rates of bullying.

Patel (2023) examined the relationship between social media use and mental health outcomes in adolescents and found that increased screen time, particularly on platforms like TikTok and Instagram, was correlated with higher levels of anxiety and depressive symptoms, further also highlighted that adolescents with pre-existing mental health vulnerabilities were more susceptible to the negative effects of social media. Thompson (2023) supported these findings, noting that adolescents often turn to social media for social comparison, that further exacerbates feelings of inadequacy and loneliness.

Fischer (2022) explored the link between social media use and depressive symptoms among adolescents. The study suggested that platforms, especially Instagram, where image-based content is central, contributed significantly to feelings of inadequacy, especially among adolescent girls. The findings of study aligned with Thompson & Harris

(2022), who reported that adolescents who frequently compared themselves to others on social media were more likely to report symptoms of depression and anxiety. The study called attention to the need for mental health professionals to monitor social media usage in this demographic to better understand its impact.

Parker (2022) examined the relationship between social media use and mental health among adolescents, and found that while adolescents often use platforms for connection and self-expression, the prevalence of negative outcomes such as anxiety and depression was also concerning. The study revealed that increased time spent on social media correlated with heightened levels of stress, which could be linked to constant comparison and cyberbullying. On the other hand, positive effects like emotional support and networking were also reported by participants**.**

Parsons & Schmidt (2021) explored the relationship between social media and mental health in adolescents, and found out that social media use was associated with both positive and negative mental health outcomes. Adolescents who engaged in supportive online communities reported improved self-esteem and reduced loneliness. However, those who were exposed to cyberbullying or engaged in social comparison experienced heightened levels of anxiety and depression. It suggested that the quality of interactions, rather than the amount of time spent on social media, was the key determinant of mental health outcomes.

Vuorinen & Singh (2021) studied the role of social media in the mental health crisis of adolescents: Trends and implications and found that adolescents who experienced mental health crises were more likely to attribute their distress to factors related to social media use, such as cyberbullying, unrealistic beauty standards, and social isolation. The findings emphasized the need for better mental health resources within online platforms to address these challenges.

Gentina & Chen (2021) conducted cross-national study on Digital stress and mental health among adolescents. The study focused on the concept of "digital stress," where constant connectivity and the pressure to respond to social media notifications contributed to anxiety and poor mental health. Adolescents from different cultural backgrounds reported similar experiences of stress due to online obligations, leading to disrupted sleep, increased emotional fatigue, and reduced ability to concentrate on offline activities.

Nesi (2020) explored challenges and opportunities related to the impact of social media on youth mental health and the study highlighted that social media amplified peer influence, making adolescents more sensitive to peer approval and rejection. Adolescents

who spent more time on social media platforms reported feeling pressure to conform to unrealistic standards, which led to anxiety, depression, and diminished self-esteem. The study also suggested that social media could serve as a valuable tool for peer support if used positively, although many adolescents found it difficult to avoid negative interactions.

Vannucci, Ohannessian & Gagnon (2019) studied social media use and anxiety in emerging adults and found out that higher social media use was significantly related to increased anxiety among adolescents, particularly due to the pressure to appear perfect online and the fear of missing out (FoMO). Adolescents who frequently checked social media reported feeling more isolated and socially anxious, especially when their posts did not receive validation from peers. It suggested that certain social media habits, such as passive browsing, exacerbated these symptoms, while active engagement offered mild relief.

Kelly, Zilanawala, Booker & Sacker (2019) analysed the relationship between social media use and adolescent mental health and revealed that adolescents who spent more than three hours per day on social media were significantly more likely to report mental health issues such as depression, anxiety, and sleep disturbances. Girls were particularly susceptible, often citing body image concerns and social comparison as the key reasons for their distress. Boys, while affected, tended to experience these issues to a lesser degree, often due to cyberbullying and peer pressure online.

Rideout & Robb (2018) explored social media, social life of Teens reveal their experiences and found that adolescents used social media to maintain relationships, but it also exposed them to stress, pressure, and loneliness. A key finding was that teens who spent more time engaging in social comparison were more likely to report anxiety, depression, and feelings of inadequacy. On the other hand, teens who used social media to seek social support experienced improved well-being.

Twenge & Campbell (2018) explored the associations between screen time and lower psychological well-being among children and adolescents and found that excessive screen time, especially on social media, was associated with increased depression, anxiety, and lower self-esteem in adolescents. Adolescents who spent more time on social media reported feeling more socially isolated and less happy compared to those who engaged in more offline activities.

Frison & Eggermont (2017) carried out a study on the reciprocal relationships between different types of Instagram use and adolescents' depressed mood found that passive browsing on Instagram, particularly viewing appearance-related content, was

associated with increased depressive symptoms among adolescents. In contrast, posting and receiving positive feedback on posts had a buffering effect on depression, as it boosted self-esteem. The study highlighted the dual nature of social media use, where active engagement can be beneficial, but passive consumption can be detrimental.

Barry, Sidoti, Briggs, Reiter & Lindsay (2017) explored Adolescent social media use and mental health from adolescent and parent perspectives. This study highlighted discrepancies between adolescents' and parents' perceptions of social media's impact. Adolescents reported both positive aspects, such as social support and self-expression, and negative aspects, such as cyberbullying and social comparison. Parents, however, predominantly viewed social media as harmful, focusing on the risks of overuse and mental health deterioration.

Kanyinga & Lewis (2015) undertook a case study on Frequent use of social networking sites is associated with poor psychological functioning among adolescents and revealed that adolescents who frequently used social networking sites were more likely to experience poor psychological functioning, including higher levels of anxiety, depression, and emotional distress. These negative outcomes were primarily driven by social comparison, cyberbullying, and pressure to maintain an idealized online persona, which created a persistent sense of inadequacy and social alienation.

Best, Manktelow & Taylor (2014) undertook A systematic narrative review on Online communication, social media, and adolescent well-being: A systematic narrative review, The review found that while social media enables adolescents to maintain relationships and find peer support, it can also contribute to mental health challenges such as depression and loneliness. The negative effects are more pronounced when adolescents engage in passive consumption of content, leading to feelings of exclusion and emotional detachment. Active engagement, such as messaging or posting, tended to have more positive effects.

Jelenchick, Eickhoff & Moreno (2013) analysed the relationship between social networking site use and depression in older adolescents and the study suggested no clear correlation between the amount of time spent on Facebook and depression in older adolescents. However, it emphasized the importance of the quality of interactions. Adolescents who experienced conflict or engaged in social comparison on Facebook were more likely to report depressive symptoms, highlighting the role of negative interactions in influencing mental health outcomes.

Kross, Verduyn, Demiralp, Park, Lee, Lin & Ybarra (2013) undertook a study on Facebook use predicts declines in subjective well-being in young adults, the study highlights that passive use of Facebook, such as mindlessly scrolling or browsing other people's profiles without interaction, was linked to declines in subjective well-being. Adolescents who engaged in this behavior reported feeling more socially isolated and less satisfied with their lives, while those who used Facebook to actively interact with others experienced more positive outcomes.

Chou & Edge (2012) studied the impact of using Facebook on perceptions of others' lives and found that social media fosters an environment of unrealistic comparisons. Adolescents who frequently viewed idealized profiles of peers on Facebook believed that others were happier and more successful, leading to feelings of inadequacy, lower life satisfaction, and increased depression. The study highlighted that the more users passively consumed content without interacting, the stronger the negative impact on self-esteem and mental well-being.

Conclusions:

The literature consistently reveals a strong correlation between social media use and various mental health issues among adolescents, especially in relation to body image dissatisfaction, anxiety, depression, and social comparison. Multiple studies highlighted that exposure to idealized body standards on platforms like Instagram and TikTok contributed to negative body image and disordered eating behaviors (Taylor (2024), Sullivan & Chan (2024), Fischer (2022). Prolonged exposure to curated, image-centric content increases anxiety and insecurity, particularly in adolescent girls (Clark & Zhang (2024), Thompson (2023). Cyberbullying on social media has been identified as a significant contributor to emotional distress, manifesting in long-term psychological effects such as anxiety and depression (Barker & Lee (2023), Parsons & Schmidt (2021).

Furthermore, studies revealed that passive social media use—such as browsing without interaction—exacerbates feelings of inadequacy and depression (Frison & Eggermont (2017), Kross, Verduyn, Demiralp, Park, Lee, Lin & Ybarra (2013), Chou & Edge (2012). However, some research noted that active engagement in supportive online communities can provide adolescents with emotional support, improving self-esteem and reducing loneliness (Parsons & Schmidt (2021), Parker (2022).

To address the mental health challenges posed by social media, it is recommended to educate adolescents on responsible usage, emphasizing active engagement over passive browsing to reduce feelings of inadequacy (Frison & Eggermont (2017), Parker (2022).

Schools should implement media literacy programs to help adolescents critically evaluate online content and counter unrealistic beauty standards (Taylor (2024), Vuorinen & Singh (2021). Social media platforms must integrate mental health resources and tools to combat cyberbullying and promote well-being (Vuorinen & Singh (2021). Encouraging open conversations between parents and adolescents can bridge gaps in understanding and provide timely support (Barry, Sidoti, Briggs, Reiter & Lindsay (2017). Additionally, further research should explore the positive potential of social media for fostering emotional support and connection (Parsons & Schmidt (2021), Nesi (2020).

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ENVIRONMENTAL MASTERY TYPE MENTAL HEALTH OF PREGNANT WOMEN

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Abstract:

It is very important for pregnant women to be mentally healthy during pregnancy. Therefore, the aim of the present study is to study the dominance of environment as a form of mental health in the context of their involvement in the Tapovan Center of Children's Research University. This research was an ex-post-facto type of research. A non-probability's purposive sampling method was used to select *180* pregnant women. Collection of data was carried out with the help of mental health inventory. Environmental mastery is a part of the mental health. Hence the test of mental health has been used here. This tool was developed by prajapati and gajjar. For analysis of data 'F – Test' was used. The result of the study presented that there was a significant difference in Environmental Mastery type mental health of pregnant women in the context of involved and not involved pregnant women in the tapovan center. While, there is no difference between joint and nuclear type family of pregnant women. This proves that the activities performed at the Garbhsanskar (Tapovan) Center have significant impacts on pregnant women's Environmental Mastery type mental health.

Keywords: Environmental Mastery type Mental Health, Involvement, Type of Family, Pregnant Women, Garbhsanskar (Tapovan) Centre

Introduction:

Any action of a person first originates in the mind, and then that action is carried out by the body. Therefore, for any action, every person needs to be mentally healthy. Because if a person is mentally healthy, he can think on constructive aspects. Pregnancy is a very important stage in the life of women. During this time, many changes occur in the physical, mental, social, psychological, and other aspects of pregnant women. At that time, every woman needs love, warmth, support, care, happiness, mental health, and all other aspects. But for many women, this is a time of confusion, fear, sadness, anxiety, stress, and depression. Therefore, during this stage, pregnant women should enjoy daily activities. It is

also necessary to find happiness in this situation because it is not only a question of her but also of the baby developing in the womb. Therefore, if a pregnant woman is mentally healthy in addition to her physical health, then her pregnancy will be completed in a very ideal way. Therefore, the aim of the present study is to investigate how involvement in prenatal care centers improves the environmental mastery type of mental health of pregnant women.

Environmental mastery is the part of mental health. Hence, an attempt has been made here to understand the first mental health.

The concept of mental health and adjustment are closely related. A person who possesses sound mental health may be said to be an adjusted person. Mental health is a branch of science which deals with the mental health of the individuals. Clifford Beers started the movement of mental hygiene in the first decade of the 20th century with the publication of A Mind That found itself (1908). His book revolutionized the concept of mental health.

Menninger (1945) defined "mental health as the adjustment of human beings to each other and to the world around them with a maximum of effectiveness and happiness".

Involvement in Tapovan Center's: - Those pregnant women who regularly participate in daily activities performed by Tapovan Center of Children's University are termed as involvement in the Tapovan Center. When pregnant women do not take regular part in the daily activities performed by Tapovan Center of Children's University, they are termed as non-involved in the Tapovan Center.

Garbhsanskar (Tapovan) centre

Prenatal education is a part of the cultural way of life in Indian tradition. It is necessary that the education of a child's excellence begins from its conception and continues all through life. During pregnancy, the child is affected by the physical, psychological, and spiritual well-being of the mother. We need to authenticate this knowledge through a series of research studies. Children's University has taken initiative with the help of the two-dimensional concept of the Tapovaan Research Center. These two dimensions are: (1) research in eugenics; and (2) guidance and education of pregnant mothers for giving birth to the best of the children.

Activities of Tapovan Research Center such as Pranayam/Yoga, Showing Film/ Video, Prayer, Prakrtivihar, Meditation, Sanskrit Reading, Garbhasamvad, Personal Counseling, Art skills/ Paintings, Group Counseling, Games–Intellectual, Mathematical Physical Puzzles, Music, Development of Elocution, Reading/Discussion, Storytelling, etc…

"Prajapati, (2015) study results show that a significant difference was found whenever pregnant women were involved in Tapovan research center activities. On the contrary, no significant difference was found with respect to education."

"Prajapati, & Purohit, (2017) study results show that Pregnant women who were involved in activities which were carried out by Tapovan research center whose mental health was better than pregnant women."

"Prajapati and Thaker (2024) found that there was a significant difference of Psychological Counselling needs of pregnant women in the context of involved and not involved pregnant women in tapovan Centre and also found in Urban and Rural area. In which the psychological counselling needs of pregnant women not involved in the Tapovan Center was found to be higher than that of involved pregnant women."

"Prajapati (2024) found that the pregnant women who involved in the Tapovan Centre have an increase in mental health compared to the non-involved pregnant women."

Kaplan and Sadock (1993) define mental health as: "a condition of well-being and the feeling in person when can come to terms with society and personal situation and social features are satisfying for him/ her"

In the words of D B Klein, "Mental hygiene as its name suggests is concerned with the realization and maintenance of the mind's health and efficiency"

In line with E G Boring, "The aim of mental hygiene is to aid people to achieve more satisfying and more productive life through the prevention of anxieties and maladjustments."

Objectives of this study:

(1) To study the main effect of involvement in Garbhasanskar (Tapovan) centre on environmental mastery type of mental health among involved and not involved pregnant women in Garbhasanskar (Tapovan) Centre.

(2) To study the main effect of types of family on environmental mastery type of mental health among joint and nuclear family of pregnant women.

(3) To study the interaction effect of involvement in Garbhasanskar centre and Types of Family on environmental mastery type of mental health among pregnant women.

Hypothesis of this study:

(1) There will be no significant main effect of involvement in Garbhasanskar (Tapovan) centre on environmental mastery type mental health among involved and non-involved in Garbhasanskar centre of pregnant women.

(2) There will be no significant main effect of types of family on environmental mastery type mental health among joint and nuclear family of pregnant women.

(3) There will be no significant interaction effect of involvement in Garbhasanskar centre and types of family on environmental mastery type mental health in pregnant women.

Variables of this study:

The following variables were treated as independent and dependent variable:

Table 1: Variables were treated as independent and dependent variable

No	Type of variable	Name of variable	Level of variable	Name of level of variable
1	Independent	Involvement in Garbhsanskar (Tapovan) Center	2	1. Involved 2. Not Involved
2	Independent	Types of Family	2	1. Joint 2. Nuclear
3	Dependent	Environmental mastery type Mental health	1	Environmental mastery type Mental health

Research Design:

The purpose of the present study is to investigate the main and interaction effects of two variables, namely types of family and involvement of pregnant women in Tapovan Center. 2x2 factorial design was used for collecting the data which was given below:

Table 2: 2x2 factorial design was used for collecting the data

Variable		Involvement (A) ↓		Total
		Involved (A1)	Not Involved (A2)	
Types of family (B)	Joint (B1)	45	45	90
	Nuclear (B2)	45	45	90
Total		90	90	180

Research Population and Sample:

The present study included involved and not involved pregnant women in Tapovan Centers run by the children's research University as the population. The sample of the investigation was comprised of 180 pregnant women. A Purposive Sampling Technique was used for selecting 180 involved and not involved pregnant women in tapovan center as

per the requirement of research design of this study. The sub groups of the sample were distributed as shown in research design of the study.

Tools: Following standardized tools was used for collecting the data.

❖ **Personal Date Sheet:**

A personal data sheet was developed by investigator who used to collect information of pregnant women about involvement in Tapovan Centre, types of family, education, area, age, income per month, education of spouse, working women, number of Pregnancy, number of children etc.

❖ **Mental Health inventory for pregnant Woman:**

In the present study, since environmental mastery is a type of mental health, the test of mental health has been taken. For This research study to measure the mental health of pregnant woman's, Mental Health inventory for pregnant Woman was developed by A. N. Prajapati & Dharti. N. Gajjar (2023). In which a total of 32 statements have been included. 22 positive and 10 negative. Whose Options respectively, Agree, Neutral and Disagree. The present test is divided into 5 sections like 1. Perception of Reality, 2. Integration of Pregnancy, 3. Positive Self-Evaluation, 4. Pregnancy Group oriental Attitudes and 5. Environmental Mastery. Split half reliability of test was 0.72 and validity of the presented scale has been discovered by experts at a high level.

Statistic Tool:

The obtained data from 180 pregnant women have been analyzed with adequate statistical techniques of Analysis of variance (ANOVA).

Result and Discussion:

Table 3: Analysis of Variance for environmental mastery type mental health in relation to involvement and type of family

| Variables	Sum of Square	df	Mean sum of Square	F	Sig. Level
Involvement (A)	36.100	1	36.100	6.70	0.05
Types of Family (B)	5.878	1	5.878	1.09	NS*
Involvement & Types of Family (A x B)	20.544	1	20.544	3.81	NS*
SSw	948.733	176	5.391		
SST	1005.578	179			
Sig. level: 0.05 = 3.86 : 0.01 = 6.84 * Not Significant					

Table 3 shows that the one main variable, i.e., involvement in the Tapovan center of pregnant women (F=6.70), is significantly influencing the environmental mastery type of mental health, while the types of family is not found to be significant (F=1.09), and the involvement types of family are found to be not significant. (3.81)

Main Effects:

Ho₁ *There will be no significant main effect of involvement in Garbhasanskar (Tapovan) centre on environmental mastery type mental health among involved and non-involved in Garbhasanskar centre of pregnant women.*

Table 4: Mean score on environmental mastery type mental health with regards to involvement

Variables	N	M	F	Sig.
Involved (A1)	90	14.78	6.70	0.05
Not Involved (A2)	90	13.83		
Sig. level: 0.05 = 3.86, 0.01 = 6.70 * Not Significant				
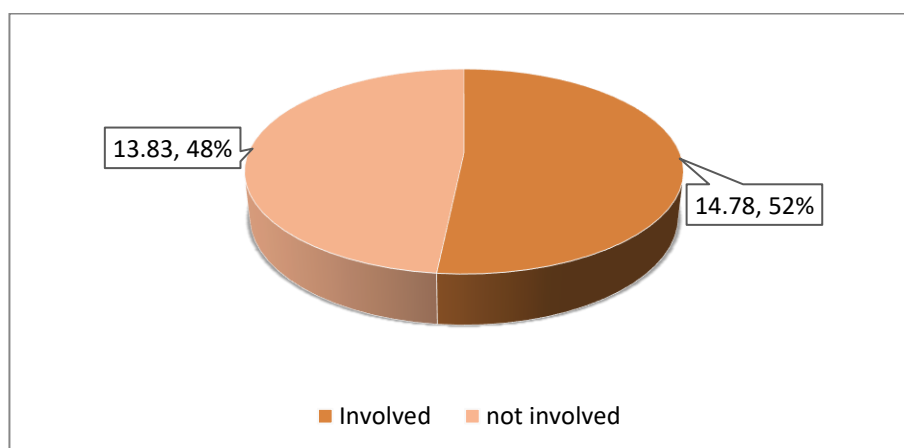
Figure 1: Pie Chart of Mean Scores on environmental mastery type mental health with regarding to involved and not involved in Tapovan center of pregnant women

It is observed that the mean scores in Table 4 and figure 1 reveal that pregnant women involved in Tapovan centres acquire a higher score (M = 14.78) than pregnant women not involved in Tapovan centers (M = 13.83) on environmental mastery type mental health. For testing hypothesis, an f test has been calculated. The f value is 6.70, which is significant. It proves that null hypothesis no. 1 is not accepted.

Ho2 *There will be no significant main effect of types of family on environmental mastery type mental health among joint and nuclear family of pregnant women.*

Table 5: Means score on environmental mastery type mental health with regards to Types of family

Variables	N	M	F	Sig.
Joint (B1)	90	14.50	1.09	NS
Nuclear (B2)	90	14.12		
Sig. level: 0.05 = 3.86 : 0.01 = 6.70 * Not Significant				
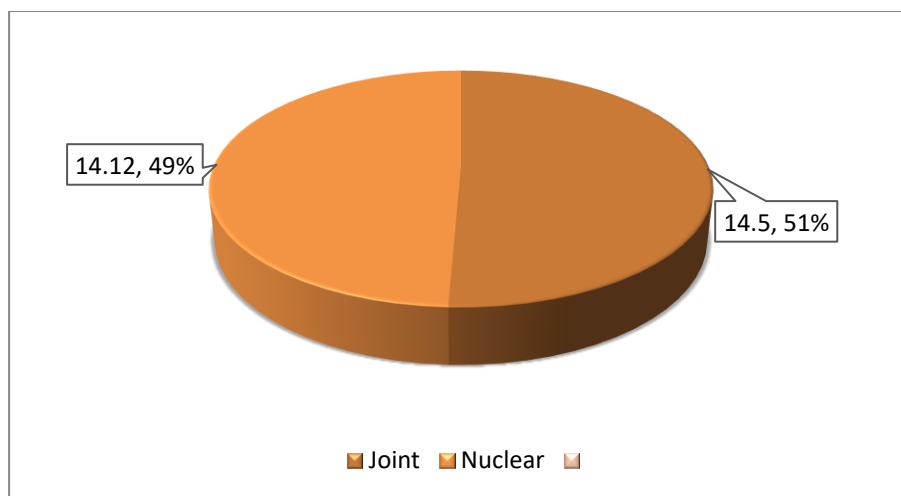
Figure 2: Pie chart of mean scores on environmental mastery type mental health with regard to types of family

It's observed that the mean scores in Table 5 and Graph 2 reveled that joint family acquire slightly more score (M=14.50) than the nuclear family of pregnant women (M=14.12) on environmental mastery type mental health. For testing hypothesis f test has been calculated. The f value is 1.09 which is not significant. It proves that null hypothesis no. 2 is not rejected.

Interaction Effect:

Ho3 *There will be no significant interaction effect of involvement in Garbhasanskar centre and types of family on environmental mastery type mental health in pregnant women.*

Table 6: Mean Scores on environmental mastery type mental health with regards to involvement & types of family (A x B)

Gender	Involvement		'F'	Sig.
	Involved	Not Involved		
Joint	15.33	13.67	3.81	0.05
Nuclear	14.23	14.00		
Sig. level: 0.05 = 3.86 : 0.01= 6.70 * Not Significant				

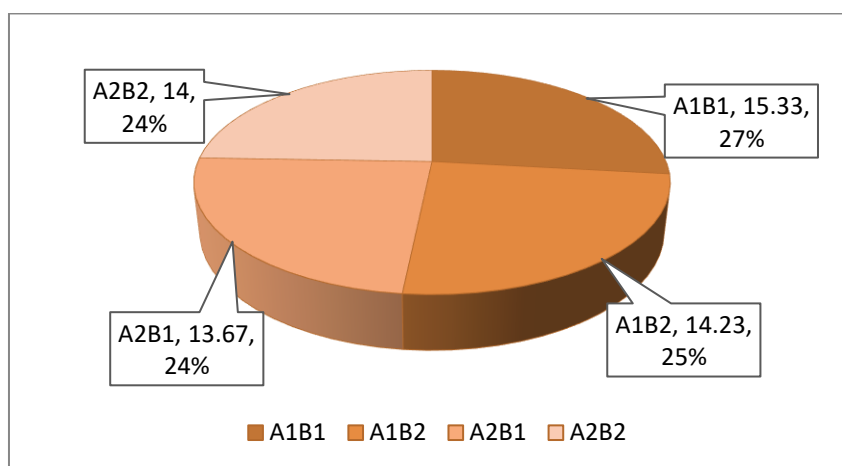**Figure 3: Pie chart of mean scores on environmental mastery type mental Health with regard to involvement and types of family**

It is evident from Table 6 and Graph 3 that the F value (F = 3.81) is not significant, which suggests that the obtained differences among involvement and types of family interaction subgroups are non-significant. To sum up, among the A x B interacting groups, the group with slightly high environmental mastery type mental helath is involved in Tapovan centres and joint family of pregnant women (M = 15.33), and the slightly lower group is not involved in Tapovan centres and joint family of pregnant women (M = 13.67). Result reveals that the mean scores of two groups as regards involvement and types of family are no differ on integration type mental health (F= 3.8); therefore, null hypothesis No.3 is not rejected.

Conclusion:

1) The difference between the environmental mastery type mental health of pregnant women with respect to involvement of Garbhasanskar (Tapovan) Centre was found to be significant (F = 6.70). Therefore, the pre formed hypothesis is not accepted. This proves that the activities like Garbhadhyan, Garbhavsamvad, prayer, music, yoga

embroidery, reading, discussion, etc. conducted at Garbhasanskar (Tapovan) Centre increase the environmental mastery type mental health of pregnant women.

2) No significant difference was found between joint and nuclear family of pregnant women's environmental mastery type mental health. So that it was concluded that types of family has no major impact on environmental mastery type mental health in this research. Therefore, the pre formed hypothesis is not rejected.

3) No significant difference was observed in the environmental mastery type mental health of pregnant women of Garbhasanskar (Tapovan) center involvement and types of family. Therefore, the pre formed hypothesis is not rejected.

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ASSESSMENT OF THE IMPACT OF DIGITIZATION ON WOMEN EMPOWERMENT: A WAY FORWARD TO BRIDGE THE DIGITAL GENDER DIVIDE

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Abstract:

The present study was attempted to study the association of the literacy rate of women, Human Development Index (HDI) and the digitized rate of women across the states and union territories of India. The information regarding these parameters was obtained from secondary sources. It was found from the study that women literacy rate and women digitized rate of all the states and union territories in India are positively correlated (r = 0.83). The correlation between digital literacy rate of women and Human development index of women is also found to be positively correlated i.e., r = 0.70. Thus, it can be implied that education i.e., the literacy rate and Human Development Index plays a crucial role in women being digitally empowered. Digital knowledge has become the most relevant knowledge to acquire in current times in this era of widespread advanced technologies. Women needs to be digitally empowered as the overall development of the society is often hindered by gender disparity, which is a global issue. The study aims to perceive how digitization can help bridge gender divide and ensure gender equity.

Keywords: Women Empowerment, Gender Disparity, Correlation, Digitization, Education

JEL Keywords: A10, A13, A19, I28, J16

Introduction:

Women are very capable right from handling household chores to dealing with other important matters in the society and constitute nearly half of the world population. However, in the past women were suppressed and had a secondary status in society with handful of opportunities for economic participation and limited access to resources. Thus, gender disparity is a global issue that intervenes with the healthy development of the society. In terms of internet usage, only 29% of women use the internet (Women, 2019). India's goal of achieving a digital economy or improved digital literacy cannot be attained within the expected time span until the percentage of internet usage in case of women

increases. The winds of radical change in the fields of employment and information technology have brought with them a wide range of opportunities for women in India and across the globe (M. *et al.,* 2020). Digitization is the most indispensable skill required for the empowerment of the nation. Digitization is to create a new opportunity to empower women to improve entrepreneurship opportunities using ICT (Rajahonka and Villman, 2019). In today's technology-driven world, lives of people are reinforced by the internet and the gadgets with which they can access it to upgrade themselves in order to keep pace with the technological development. The development of mobile technology has brought the world to one's fingertips and has allowed women to update themselves about everyday national and global news. Women can use technology to successfully build personal confidence & self-esteem that has wider implications in women's lives (Malhotra, 2015). The human development index and literacy level of women are the key factors that aids in determining how technological advancement can help uplift women and balance the economy of the country at large. The empowerment of women can help to build their ability to get involved in decision making in a better way to effectively overcome in the era of social, political and economic obstacles as well as strengthening them to participate into the digitization processes (Cummings and Tam O' Neil, 2015). Thus, this paper aims to identify whether the digital literacy rate of women is related to education (literacy rate) and Human Development Index (HDI).

Methodology:

The study was based on secondary data procured from various government reports and publications. The data on literacy rate of women in India across 28 states and 7 union territories were collected from National Statistical Office (NSO). The data regarding human development index among the states and union territories were obtained from the Human Development Index report (2021). The data regarding digital literacy rate among women in different states and union territories of India were obtained from the report by National Family Health Survey (NFHS).

Analytical Techniques

Correlation among digital literacy rate of women, education (literacy rate) and human development index (HDI)

The strength of the relationship between digital literacy rate of women and education literacy rate of women across the states and Human Development index were computed using the Karl Pearson correlation coefficient.

$$r = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[n\sum X^2 - (\sum X)^2] - [n\sum Y^2 - (\sum Y)^2]}}$$

Here, n = Number of pairs of variables

X = X i.e., the independent variable, which in this case will be education (literacy rate) and Human development index (HDI)

Y = Y i.e., the dependent variable, which in this case will be digital literacy rate of women

Correlation Coefficient value always lies between -1 to +1. If correlation coefficient value is positive, then there is a similar and identical relation between the two variables otherwise, it indicates the dissimilarity between the two variables.

The calculated correlation coefficients were tested for their significance by employing Students-t test.

Results and Discussion:

The literacy rate of women is the highest in Kerela (91.98%) and it is the lowest in Bihar bearing a percentage of 53.33%. It can also be seen that the Human development index of Kerela (0.752) is the highest and it is the lowest in Bihar (0.571). Assam stands in average position with HDI 0.597. Kerela has the highest women digital literacy rate (96.18%). Bihar has the lowest women digital literacy rate (20.60 %) followed by Andhra Pradesh (21%). In Assam, the digital literacy rate of women is 28.2% which indicates that access to the internet for women was slightly better that that of Bihar and Andhra Pradesh, but equally bad in the larger context. It can be inferred from Fig. 1 that women literacy rate and women digitized rate of all the states and union territories in India are positively correlated i.e., r = 0.83 which indicates that more the number of women are educated higher will be the percentage of them being digitally literate. It is evident from Fig. 2 that the correlation between digital literacy rate of women and Human development index of women is also found to be positively significant i.e., r = 0.70. Thus education (literacy rate) and Human development Index has a positive influence on women being digitally literate which thereby implies that when women are educated and are financially independent, they are more likely to be digitally empowered and they are more capable of understanding how the world operates digitally. Both of these factors play an integral role on women empowerment in their own ways by providing women confidence and the necessary skill set to compete achieve and thrive. Education covers a broader aspect in terms of knowledge acquisition and building awareness with respect to the changing times.

It was also observed that only 33% of women in India had access to the internet as opposed to 57.1% of men as per the NFHS-5 (2019-2021) report. The gender gap between male (82.14%) and female (65.4%) literacy rates remains high at 17.10 as per 2011 census (Beena and Mathur, 2012). This digital gender divide must be bridged.
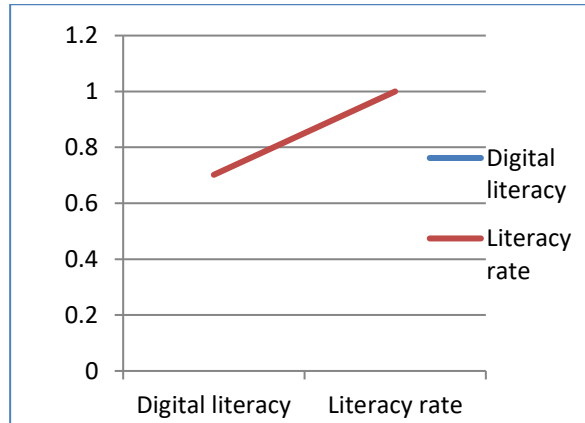
Figure 1: Positive correlation between literacy rate and digital literacy rate of women
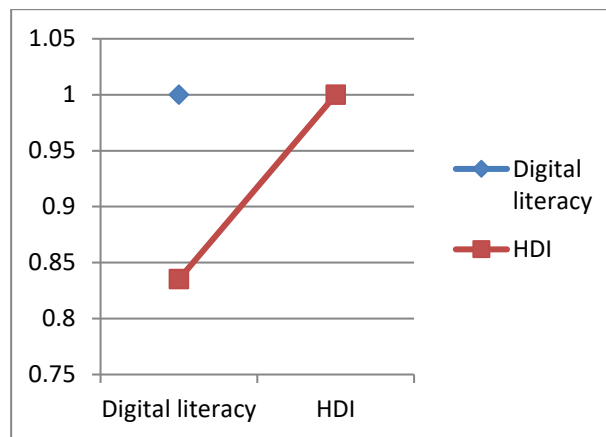
Figure 2: Positive correlation between Digital Literacy and literacy rate of women
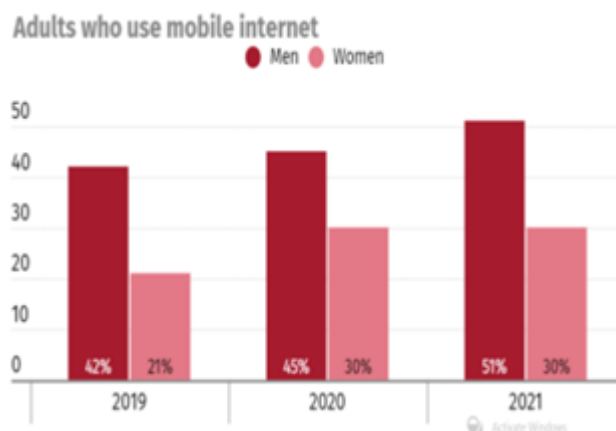
Figure 3: Percentage of men and women having access to internet in India (Source: NFHS-5 (2019-2021) Report)

The Benefits of Digitization on Women's Empowerment are as follows:

- **Global Recognition:** Technology has been able to bring more women to a global platform and has helped them gain recognition at a global level which also encouraged other women to break down the barriers and carve a niche for themselves at a global level. Women engaged in e-commerce activities are now able to fulfill their household responsibilities as well as interact with customers at global stage.

- **Safe working ecosystem:** Digitization has provided a flexible, safe and secure working ecosystem for women, which thereby enhances the productivity and willingness of women to work. It gives the power to bridge the equality gap supporting gender equality, when more females are stepping out for work and using technology to do it at the ease of their safe and adaptable home environment (Rajput, 2021).

- **Collaboration with local artisans and industries:** Local small and medium scale industries are backed by the enormous support of digital technology. Tech savvy educated women promote Indian handicraft and handloom industry of the local artisans at the global level and help raise their standard of living which ultimately shapes the economy of the nation in a better way.

Policy Implications

1. The first and foremost step towards improving women's and girls' access to technology and digital spaces is to push digital technology education and actively support and promote their participation in related subjects.

2. There should be strong cooperation across stakeholders to encourage participation of women and girls in the digital world and also there is a need to promote role models and mentors for girls so

   that they can grow up knowing and believing that their gender should not be a barrier to anything they want to become.

3. Arranging classes and sessions specifically targeting girls in locations accessible to them for teaching digital literacy and ensuring they know how to get the most out of their devices, thereby helping women and girls to complement their social skills with higher education and advanced digital skills.

4. Ensuring women and girls are well aware of the risks associated with using technology, knowing what to do and who to contact if they feel uncomfortable is a crucial part of closing the digital gender gap.

5. Ministry of Electronics and Information Technology (MeitY) need to evolve a comprehensive cyber-security framework for data security, safe digital transactions, and complaint redressal.

6. Concrete policy actions are needed to foster women's and girls' full participation and inclusion in the digital economy, while at the same time addressing stereotypes and social norms that lead to discrimination against women.

Conclusion:

The study provides a useful insight on the position of the states of India with respect to digital literacy of women and Human development index (HDI). It was found that there is a positively significant relationship between women literacy rate and women digitized rate in India and likewise for Human development index (HDI) and women digitized rate. Lack of education for women, naturally engages them in very low wage occupations where there is basic need for money (Rajput, 2021) thus lowering their standard of living and which ultimately leads to lower Human Development Index (HDI). The current era is one of technological advancement and widespread digitization. There is a dire need to provide a platform to women so as to enable them to use technology which will ultimately help them break down the barriers of suppression they have faced over the decades. Digital transformation provides new avenues for the economic empowerment of women and can contribute to greater gender equality. Greater inclusion of women in the digital economy and increased diversity bring value, both social and economic. Thus, digitization has been found to play a pivotal role in women empowerment and bridging the digital gender divide ensuring gender equality.

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THE ART OF TIME MANAGEMENT: STRATEGIES FOR SUCCESS

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Abstract:

Time management is a critical skill that balances productivity, efficiency, and personal well-being. It involves planning, prioritizing, and executing tasks to align with goals while minimizing stress. Renowned thinkers like Stephen Covey and Peter Drucker emphasize that effective time management is about distinguishing between urgency and importance, focusing on priorities rather than volume. Its core aims include enhancing productivity, meeting deadlines, reducing stress, and achieving work-life balance. Effective time management relies on key characteristics such as goal orientation, prioritization, adaptability, and discipline. Tools like the Pomodoro Technique, Eisenhower Matrix, and SMART goals are instrumental in improving focus and organization. Strategies such as Pareto's Principle, Parkinson's Law, and time blocking highlight the importance of leveraging high-impact tasks and maximizing peak productivity periods. These approaches provide structured yet adaptable frameworks to streamline efforts, reduce procrastination, and enhance overall effectiveness. Ultimately, mastering time management ensures alignment with personal and professional objectives.

Keywords: Time Management, Productivity, Efficiency, Prioritization and Discipline

Introduction:

Time management is more than just scheduling tasks. It is the ability to use your time effectively to achieve your goals while maintaining balance in your life. It is an art that requires discipline, clarity, and a commitment to focus on what truly matters. Time management is a crucial skill that goes beyond merely organizing tasks on a calendar. It is about using time effectively to achieve goals, boost productivity, and maintain a sense of balance in life. In today's fast-paced world, where demands on our time are constant, the ability to manage our time well is essential for personal and professional success. Effective time management allows individuals to focus on what truly matters, helping to prioritize tasks, avoid procrastination, and minimize distractions. By planning ahead and breaking tasks into manageable chunks, people can make progress toward their goals without feeling overwhelmed. Moreover, time management involves balancing work with personal

commitments, ensuring that one's physical and mental well-being is not neglected in the pursuit of success.

Time management is not just about completing tasks; it's about making intentional choices to use your time in alignment with your values and priorities. It requires self-discipline, as well as the ability to evaluate tasks based on their urgency and importance. This clear decision-making process ensures that individuals stay on track and avoid wasting time on unimportant activities. Incorporating time management into daily life is an ongoing practice that requires commitment and adjustment. By continuously refining techniques and staying focused on the bigger picture, individuals can improve their productivity, reduce stress, and achieve their long-term goals without sacrificing personal well-being. Ultimately, mastering time management leads to a more fulfilling and purpose-driven life.

Renowned productivity expert Stephen R. Covey defines time management as *"the ability to decide beforehand the difference between what is urgent and what is important, and then acting on that distinction to align with your values and long-term objectives."* Similarly, Peter Drucker, the father of modern management, emphasizes, *"Time is the scarcest resource, and unless it is managed, nothing else can be managed."* These definitions highlight that effective time management is not about doing more but doing what aligns with your priorities and purpose. Time management is the process of planning, organizing, and controlling how much time spend on specific tasks or activities to increase productivity, efficiency, and balance in life. Good time management helps individuals prioritize tasks, reduce stress, and accomplish more in less time. It involves setting goals, making plans, organizing tasks, and avoiding distractions, all of which contribute to reaching both short-term and long-term objectives.

Aim of Time Management

• Improve Efficiency and Productivity

Time management aims to help individuals use their time efficiently, completing tasks in less time with minimal effort. By organizing tasks, eliminating unnecessary steps, and streamlining processes, time management enhances productivity. Prioritizing high-impact tasks ensures that individuals are working on the right things, resulting in more meaningful and efficient work.

• Achieve Goals and Meet Deadlines

Effective time management helps people meet personal, academic, and professional deadlines, ensuring that goals are reached within a set timeframe. By allocating the right

amount of time to each task and following through on plans, individuals can avoid rushing to meet deadlines at the last minute. Setting clear goals, breaking them down into manageable tasks, and establishing realistic timelines ensures steady progress.

- **Reduce Stress and Enhance Well-Being**

By planning and prioritizing, time management minimizes the last-minute rush, reducing stress levels and improving overall mental health. By planning ahead, setting realistic expectations, and allowing time for breaks, individuals can avoid burnout and maintain a healthy mental state. Additionally, the confidence of staying on top of tasks leads to a greater sense of control, which significantly contributes to emotional wellbeing.

- **Enhance Work-Life Balance**

Good time management helps people allocate sufficient time for both work and personal life, improving overall life satisfaction and reducing burnout. Allocating time for leisure activities, family, hobbies, and rest helps maintain motivation and energy, leading to a more balanced, satisfying life. When people effectively manage their time, they can avoid burnout and ensure that they are fully present both at work and at home.

- **Increase Focus and Reduce Procrastination**

Time management techniques help individuals stay focused on important tasks, minimize distractions, and avoid procrastination. Time management combats procrastination by breaking tasks into smaller, more manageable parts and setting clear priorities. This focus on specific tasks reduces distractions and increases attention, allowing individuals to stay on track. Time management strategies such as the Pomodoro Technique or time blocking help individuals focus on one task at a time, preventing the temptation to switch between tasks or engage in unproductive activities.

- **Promote Self-Discipline**

Managing time well encourages self-discipline, enabling people to follow through on commitments and stay on track with their plans. It teaches individuals to make deliberate choices about how to allocate their time, and helps them develop the ability to resist distractions, stay organized, and meet their goals.

Characteristics of Time Management

- **Goal-Oriented**

Time management involves setting clear goals and objectives to help prioritize tasks. Effective time management aligns daily activities with these goals. The goals could be long-term (such as career advancement) or short-term (such as finishing a project or studying for an exam), but they should always guide time allocation. By focusing on what

truly matters, individuals can avoid wasting time on tasks that don't contribute to achieving their overall objectives.

- **Prioritization**

Successful time management requires identifying which tasks are most important and urgent, and completing those before less critical activities. Effective time management is rooted in prioritization. Not all tasks are equally important or urgent, so it is essential to distinguish between what needs immediate attention and what can be delayed. Prioritization involves assessing the urgency and importance of each task and focusing on those that contribute directly to goals or have higher consequences.

- **Flexibility and Adaptability**

While structure is important, flexibility is essential to adapt to changes and unexpected events. Good time managers adjust their schedules as needed without losing sight of priorities. Life is unpredictable, and unexpected events or changes in priorities can disrupt even the best-laid plans. Successful time managers know that they must be adaptable in adjusting their schedules as new tasks or challenges arise. For instance, if a project takes longer than expected or an emergency occurs, they are able to rearrange their priorities without completely derailing their time management efforts.

- **Setting Deadlines**

Effective time management involves setting specific deadlines for tasks, helping ensure tasks are completed on time and within the required timeframe. Time management involves setting clear and realistic deadlines for each task, which helps individuals stay focused and accountable. These deadlines push individuals to complete tasks on time, avoiding the stress of last-minute work. Deadlines also allow for a clear evaluation of progress, ensuring that tasks are completed within the desired timeframe and helping to measure overall productivity.

- **Self-Discipline and Focus**

Effective time managers are disciplined in sticking to their schedules and avoiding distractions, ensuring that they stay on task. A disciplined individual understands that every task has its allotted time and sticks to it. For example, turning off notifications, limiting social media use, and working in focused bursts (e.g., Pomodoro Technique) can help maintain discipline and focus.

- **Efficiency and Organization**

Good time managers are efficient, often finding ways to streamline processes, organize resources, and eliminate wasteful activities. Efficiency refers to completing tasks

using the least amount of time and effort while still maintaining quality. Time managers are constantly looking for ways to optimize their processes, whether by automating tasks, eliminating unnecessary steps, or improving workflows.

• Time Tracking and Reflection

Time tracking involves monitoring how time is spent to identify areas for improvement. Reflecting on what works and what doesn't can enhance future time management practices. Tracking how time is spent is an essential characteristic of time management. Time tracking helps individuals identify areas where they may be wasting time or where improvements can be made. By keeping a log of how time is spent throughout the day, individuals can gain insight into their productivity patterns and uncover time drains (e.g., excessive meetings or long breaks).

• Avoidance of Procrastination

Managing time effectively means resisting the urge to delay important tasks. Procrastination is replaced by purposeful action toward goals. Good time managers recognize the importance of overcoming procrastination by taking purposeful action, even if it's just starting a task. Breaking large tasks into smaller, manageable parts and tackling the most challenging aspects first (also known as the "eat the frog" method) can help prevent procrastination. By staying consistent and proactive, individuals can reduce procrastination and maintain progress toward their goals.

Tools in Time Management

There are various important tools that help in managing time effectively.

- Peak load period
- Work curve
- Rest period

Peak Load

The peak load period refers to times of the day or week when the workload or demand for effort is at its highest. During these periods, the focus and energy required are greater, often because tasks are more complex, urgent, or concentrated. In family resource management, peak load periods might occur when several tasks need to be completed simultaneously, such as preparing meals, helping children with homework, and completing household chores in the evening.

Work Curve

A work curve is a graphical representation of productivity levels or effort expended over time. It helps visualize periods of high and low productivity within a day, week, or

another period. Typically, productivity does not remain constant but fluctuates, often peaking and dropping based on various factors. The work curve can help individuals and families identify the best times for performing tasks that require high focus and energy and the best times for routine or low-energy tasks. For example, people may have higher productivity levels in the morning and experience a dip after lunch.

Rest Periods

A rest period is a designated break from work or activity to allow for recovery and recharge, helping to maintain long-term productivity and prevent burnout. Rest periods can be short breaks taken throughout a work session or longer intervals, like lunch breaks or end-of-day downtime. Rest periods are essential for restoring physical and mental energy, improving focus, and reducing stress. In a family setting, rest periods can include family time after school and work, sleep, or even brief breaks between household chores.

Strategies to Time Management

Certain tools or strategies that are more specifically related to time management as

- Effectiveness or efficiency
- Pareto's principle
- Parkinson's Law
- Prime time
- Time logs

Effectiveness or Efficiency

Effectiveness refers to doing the right tasks that align with goals or priorities, while efficiency focuses on performing tasks in the best possible way with minimal waste of time and resources. In time management, balancing effectiveness and efficiency is essential. It's not just about completing tasks quickly but ensuring that the tasks being completed are actually important and impactful. In family resource management, this might mean choosing activities that have the highest impact on family goals (effectiveness) and finding streamlined ways to accomplish them (efficiency).

Pareto's Principle

The Pareto Principle, or the 80/20 Rule, suggests that roughly 80% of results come from 20% of efforts. In time management, this means focusing on the key tasks that provide the most significant outcomes. Applying the Pareto Principle can help prioritize high-impact tasks over less important ones, leading to more efficient use of time and resources.

Parkinson's Law

Parkinson's Law states that "work expands to fill the time available for its completion." This means that if you set a long deadline, the task may take longer to complete, even if it could be done in less time. To manage time effectively, it's helpful to set shorter, more realistic deadlines to increase focus and prevent procrastination.

Prime Time

Prime time refers to the times during the day when an individual is most productive or energetic. Using prime time for high-priority or challenging tasks can increase efficiency and effectiveness. Recognizing personal or family prime time allows for scheduling important activities during peak productivity, making the best use of energy and focus. For example, if parents are most productive in the morning, they might choose to tackle complex household tasks or important planning during that time.

Time Logs

Time logs involve tracking how time is spent over a period, providing insights into time usage, identifying wasted time, and helping to make adjustments for better time management. By logging time, individuals and families can see where time is going and find areas to streamline or prioritize more effectively.

Effective Time Management Techniques

1. Pomodoro technique
2. Eisenhower Matrix
3. Eat That Frog
4. Time blocking
5. Rapid Planning Method (RPM)
6. 80/20 Rule (Pareto analysis)
7. SMART goal system

Pomodore Technique

The Pomodoro Technique involves working in focused intervals (usually 25 minutes), known as "Pomodoros," followed by a 5-minute break. After completing four Pomodoros, you take a longer break, typically 15-30 minutes. This technique helps maintain concentration and prevents burnout by breaking work into manageable chunks. It's especially useful for those who struggle with procrastination or need regular breaks to stay fresh and focused.

How it Works

• Decide what task you want to complete.

- Set a timer for 25 minutes.
- Work on the task with full focus until the timer rings.
- Take a short 5-minute break—stretch, grab a coffee, or relax.
- Set the timer again for another 25 minutes and work on the next task.
- After completing four 25-minute sessions, take a longer break of 20-30 minutes before starting the process again.

Eisenhower Matrix

- Also known as the Urgent-Important Matrix, the Eisenhower Matrix categorizes tasks into four quadrants based on urgency and importance:
- **Quadrant 1**: Urgent and Important (do these tasks immediately)
- **Quadrant 2**: Not Urgent but Important (schedule for later)
- **Quadrant 3**: Urgent but Not Important (delegate these tasks)
- **Quadrant 4**: Not Urgent and Not Important (eliminate or limit these tasks)
  This technique helps prioritize tasks, focusing on what truly matters while reducing time spent on less impactful activities.

How it Works

- Organize the tasks into four separate quadrants.
- Urgent tasks and important tasks/ projects to be completed first.
- Not urgent and important tasks/projects to be scheduled on the calendar.
- Urgent and unimportant tasks/projects to delegate to someone else.
- Not urgent and unimportant tasks/projects that can delete.

Eat That Frog

Inspired by Mark Twain's saying, "Eat a live frog first thing in the morning, and nothing worse will happen to you for the rest of the day," this technique encourages tackling the most challenging or important task first. By "eating the frog" or completing your most difficult task at the beginning of the day, you gain momentum and prevent procrastination. It's ideal for overcoming procrastination and ensuring that essential tasks are completed early on.

How it Works

- Choose your biggest goal and what you want to achieve most. Write it down.
- Set key performance indicators. ⬚ Establish a deadline.
- List the tasks needed to reach your goal and prioritize them. The top tasks are your "frogs."
- Handle the "frogs" first. If you have several, start with the hardest ones.

- Each morning, do something that progresses your goal. This ensures progress, no matter what happens later.

Time Blocking

Time blocking involves dividing your day into blocks of time dedicated to specific tasks or activities. For example, from 9:00-10:00, you might work on a report; from 10:00-11:00, respond to emails, and so on. This technique helps minimize distractions and ensures dedicated time for essential tasks. It's highly structured, making it ideal for people who prefer routine and a clear schedule. It's especially helpful for balancing work, personal tasks, and rest by allocating time for each in advance.

How it Works

- On a paper, write down blocks of time for each hour of the day. The time blocks can be any amount of time the person choose. For example, each time block can be 30 minutes, or it can be 1 hour – it's up to person.

- Estimate how much time any person going to take to complete each task and enter the task names into time blocks.

- So, person could divide entire day into 30-minute time blocks and assign the first 30-minute block to eat breakfast.

- Then assign one or more 30-minute time blocks to other tasks he/she need to accomplish that day.

- Add buffer times between a few time blocks to allow for unexpected delays and tasks that unexpectedly take a lot of time.

Rapid Planning Method

Developed by Tony Robbins, the Rapid Planning Method focuses on outcome-driven planning. Rather than simply listing tasks, RPM encourages asking three questions:

- What do I want? (goal)
- Why do I want it? (purpose)
- How will I achieve it? (massive action plan)

RPM shifts focus from just completing tasks to achieving meaningful results. It helps individuals stay motivated and aligned with their bigger goals and values. This technique is especially useful for those with big projects or multiple goals who want to keep a clear vision of their priorities.

How it Works

- This time management system involves writing down the tasks person need to accomplish in the week. Then "chunk" and group the tasks together based on

commonalities- for example, group items that are personal, group career-related tasks, etc. Create own RPM blocks by dividing a sheet of paper into three columns:

- The task
- The result person wants from completing that task
- The purpose for completing it
- Then, list the actions he/she can take to accomplish the tasks.

80/20 rule or Pareto Analysis

The 80/20 Rule, or Pareto Analysis, is based on the idea that 80% of outcomes come from 20% of efforts. In time management, this means identifying and focusing on the most impactful tasks that yield the best results. This technique helps prioritize tasks that are most productive, rather than wasting time on low-impact activities. It's especially useful for those looking to improve efficiency by focusing on tasks that bring the most significant rewards.

How it Works

- Identify the challenges or issues you need to address.
- Figure out the root cause of each one.
- Rate each issue with a score based on its priority—the more important it is, the higher the score.
- Cluster similar tasks or problems together by their root causes.
- Calculate the total score for each group.
- Prioritize the group with the highest score as your starting point.

SMART Goals

SMART goals are Specific, Measurable, Achievable, Relevant, and Time-bound. Setting SMART goals clarifies exactly what needs to be done and provides clear benchmarks for progress. This system helps break down large goals into manageable steps with clear criteria for success, enhancing focus and motivation. It's highly effective for both short-term tasks and long-term projects, making goals actionable and trackable.

How it Works

- Specific: Clearly and precisely outline your goals to know exactly what needs to be done.
- Measurable: Use metrics, numbers, or milestones to track your progress effectively.
- Achievable/Attainable: Make sure your goals are realistic and within reach.

- • Relevant: Confirm that your goals align with your projects, tasks, and broader objectives. Break them into manageable steps.

- • Time-Bound: Ensure your goals have a clear deadline and don't drag on too long. Set specific timeframes.

Conclusion:

Time management is more than a productivity tool. It is a pathway to achieving a fulfilling, balanced life. By incorporating effective strategies like prioritization, goal-setting, and efficiencyfocused techniques, individuals can maximize their potential while reducing stress. Tools like the Eisenhower Matrix and time logs enable better decision-making and alignment with priorities. With practice and commitment, time management fosters self-discipline, enhances work-life balance, and ensures meaningful progress toward long-term goals. By mastering this art, individuals can lead a more organized, purposeful, and satisfying life.

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CLIMATE-SMART AGRICULTURE AND EXTENSION SERVICES STRATEGIES FOR PROMOTING SUSTAINABLE FARMING PRACTICES AMIDST CLIMATE CHANGE

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Introduction:

Agriculture has always been central to human survival and development, providing food, livelihoods, and raw materials for billions of people worldwide. However, climate change poses a significant threat to the agricultural sector, affecting crop yields, livestock productivity, and the overall resilience of farming systems. Rising temperatures, erratic rainfall patterns, extreme weather events, and soil degradation are some of the most pressing challenges that farmers face today. In response to these threats, Climate-Smart Agriculture (CSA) has emerged as a transformative approach to farming that addresses the interlinked challenges of food security, climate change, and environmental sustainability. The importance of CSA has been recognized globally, with its principles being incorporated into the policies and programs of international organizations such as the Food and Agriculture Organization (FAO), the United Nations Framework Convention on Climate Change (UNFCCC), and national governments.

However, despite its potential, the adoption of CSA practices among smallholder farmer, who form the backbone of global food production, remains limited. Many farmers lack the knowledge, tools, and resources needed to implement CSA effectively. This is where agricultural extension services come into play. Extension services act as a bridge between farmers and the latest research, technologies, and practices, helping them adapt to climate change while improving productivity and sustainability.

This chapter, describe the concept of Climate-Smart Agriculture, the critical role of extension services in promoting CSA, and the strategies that can be employed to overcome barriers to adoption. Through real-world examples and case studies highlight how extension services can empower farmers to adopt climate-resilient practices and contribute to a sustainable agricultural future.

Climate-Smart Agriculture is not just a single set of practices but a framework designed to achieve three interconnected goals:

1. **Sustainably increase agricultural productivity and incomes**

To meet the needs of a growing global population, CSA aims to increase productivity and incomes from agricultural activities. This goal ensures food security and enhances the livelihoods of smallholder farmers, who are among the most vulnerable to climate impacts. It involves promoting practices such as improved crop varieties, precision farming, and better resource management to achieve higher yields.

2. **Adapt and build resilience of people and food systems to climate change**

Climate variability and extreme weather event such as droughts, floods, and hurricanes threaten agricultural production. CSA emphasizes the adoption of practices and technologies that enhance the adaptive capacity of farming systems. These include water conservation methods, soil health management, and the diversification of cropping and livestock systems to reduce dependence on single commodities.

3. **Reduce and/or remove greenhouse gas emissions, where possible**

Agriculture is a significant contributor to global GHG emissions, accounting for nearly 19–29% of total emissions. CSA seeks to mitigate this impact by promoting practices that lower emissions from agricultural activities, such as conservation tillage, agro forestry and the use of bio-energy. Additionally, CSA integrates livestock management techniques that reduce methane emissions, such as improving feed quality and implementing rotational grazing.

Key Features of Climate-Smart Agriculture

CSA is not a one-size-fits-all solution. It is context-specific, meaning its practices and technologies are tailored to the environmental, social, and economic conditions of a particular region. Here are some key features of CSA:

1. **Sustainability at the Core**

CSA focuses on long-term sustainability by balancing the trade-offs between productivity, resilience, and environmental protection. It aligns closely with the principles of sustainable agriculture and agro ecology.

2. **Integration of Technology and Innovation**

The use of advanced technologies, such as satellite-based weather monitoring, mobile applications, and precision agriculture tools, plays a vital role in CSA. These innovations enable farmers to make informed decisions, optimize resource use, and reduce waste.

3. **Farmer-Centric Approaches**

The success of CSA hinges on farmer participation. It prioritizes the inclusion of smallholder farmers, indigenous communities and women, ensuring that their knowledge and needs are integrated into CSA solutions. Participatory approaches, such as farmer field schools and community-driven initiatives, are widely used in CSA programs.

4. **Interdisciplinary Collaboration**

CSA combines insights from agronomy, climate science, economics, and social sciences to develop holistic solutions. It often involves collaboration between governments, research institutions, extension agencies, and non-governmental organizations (NGOs).

The Global Relevance of CSA

CSA is increasingly recognized as a critical approach to addressing global challenges such as food insecurity, environmental degradation, and poverty. It is directly linked to the United Nations Sustainable Development Goals (SDGs), particularly:

- ➢ **SDG 2:** Zero Hunger, by promoting sustainable food production systems.
- ➢ **SDG 13:** Climate Action, through resilience building and emission reduction.
- ➢ **SDG 15:** Life on Land, by improving land use and ecosystem health.

Countries worldwide are integrating CSA into their national agricultural policies and climate action plans. For instance:

- **India** has introduced the National Mission for Sustainable Agriculture (NMSA), which focuses on water management, soil health, and agroforestry.
- **Kenya** has implemented the Kenya Climate-Smart Agriculture Strategy, aimed at improving food security and reducing vulnerability to climate change.

Role of Agricultural Extension in Climate-Smart Agriculture

Agricultural extension services are critical to the successful implementation and scaling of Climate-Smart Agriculture (CSA). Extension services act as a bridge between researchers, policymakers, and farmers, ensuring that innovative CSA practices reach those who need them most. These services are instrumental in equipping farmers with the knowledge, skills, and resources to adopt climate-resilient strategies.

1.   **Capacity Building and Farmer Education**
     Why It Matters:

Farmers are often hesitant to adopt new practices due to a lack of knowledge or perceived risks. Building their capacity through education and skill development is essential for driving CSA adoption.

Key Approaches:

- **Participatory Learning Methods:** Using Farmer Field Schools (FFS) and on-farm demonstrations to enable experiential learning. These methods allow farmers to observe the benefits of CSA practices firsthand, such as improved soil health from conservation tillage or increased yields from drought-tolerant crops.

- **Customized Training Modules:** Designing region-specific training materials in local languages that address unique climatic challenges and farming practices.

- **Inclusion of Marginalized Groups:** Ensuring that women, youth, and indigenous communities are included in training programs to promote equitable knowledge dissemination.

2. **Dissemination of CSA Technologies and Practices**

   Why It Matters:

   Access to innovative tools and techniques is critical for farmers to implement CSA effectively. Extension services serve as conduits for introducing and promoting these technologies.

   Key Approaches:

- **Technology Demonstrations:** Organizing field trials to showcase CSA technologies, such as improved irrigation systems, biogas digesters, and solar-powered pumps.

- **Access to Inputs:** Partnering with seed companies and agro-dealers to ensure farmers have access to climate-resilient seeds and organic fertilizers.

- **Promoting Low-Cost Solutions:** Encouraging the use of affordable CSA practices, such as mulching, composting, and cover cropping, which require minimal investment.

3. **Leveraging Climate Information Services**

   Why It Matters:

   Timely access to climate information allows farmers to make informed decisions about planting, harvesting, and resource allocation.

   Key Approaches:

- **Weather Forecasting Services:** Collaborating with meteorological departments to provide seasonal and daily weather forecasts through SMS, radio, or mobile apps.

- **Early Warning Systems:** Establishing systems to alert farmers about extreme weather events, such as droughts or floods, helping them prepare and mitigate losses.

- **Climate-Adaptive Planning Tools:** Introducing decision-support tools that guide farmers on crop selection, planting schedules, and irrigation needs based on climatic conditions.

4. **Community-Based Approaches to CSA Adoption**

   Why It Matters:

   Collective action can amplify the impact of CSA practices by fostering resource sharing and collaborative problem-solving.

   Key Approaches:

- **Farmer Cooperatives:** Encouraging the formation of cooperatives to share resources like water harvesting systems, machinery, and storage facilities.

- **Participatory Decision-Making:** Involving communities in planning and implementing CSA initiatives, ensuring that local knowledge and preferences are integrated.

- **Knowledge Exchange Networks:** Establishing farmer-to-farmer networks to facilitate the sharing of best practices and success stories.

5. **Policy Advocacy and Institutional Support**

   Why It Matters:

   The adoption of CSA requires an enabling policy environment that supports farmers and extension agents. Extension services can play a role in influencing policy and mobilizing institutional resources.

   Key Approaches:

- **Advocating for Subsidies:** Lobbying for government subsidies on climate-resilient seeds, solar-powered equipment, and crop insurance.

- **Collaborating with NGOs and Private Sector:** Partnering with non-governmental organizations and private companies to provide funding, training, and access to markets for CSA products.

- **Integrating CSA into National Policies:** Supporting the inclusion of CSA practices in national adaptation plans (NAPs) and agricultural development strategies.

6. **Harnessing Digital Tools for CSA**

   Why It Matters:

   Digital tools enable the rapid dissemination of information, providing farmers with real-time data and practical solutions.

Key Approaches:

- **Mobile Applications:** Developing user-friendly apps that offer advice on CSA practices, pest management, and market trends.
- **E-Learning Platforms:** Creating online courses and webinars for farmers and extension agents to build their capacity on CSA topics.
- **Remote Sensing and GIS:** Using satellite imagery and geographic information systems to monitor climate risks and guide CSA interventions.

7. Monitoring and Evaluation for Continuous Improvement

Why It Matters:

Effective monitoring and evaluation (M&E) ensure that CSA interventions deliver measurable results and identify areas for improvement.

Key Approaches:

- **Farmer Feedback Systems:** Collecting input from farmers on the effectiveness of CSA practices and extension services.
- **Impact Assessment Tools:** Using indicators such as yield improvement, water savings, and emission reductions to evaluate the success of CSA initiatives.
- **Participatory Evaluation:** Engaging farmers in the evaluation process to ensure transparency and accountability.

Challenges and Opportunities in Climate-Smart Agriculture Implementation

The successful adoption and scaling of Climate-Smart Agriculture (CSA) face numerous challenges, but these challenges also present opportunities for innovation and collaboration. This section examines the obstacles to CSA implementation and identifies actionable strategies to overcome them.

Challenges in CSA Implementation

1. **Limited Access to Information and Knowledge**

Many smallholder farmers lack awareness of CSA practices and technologies due to poor dissemination of information. This knowledge gap hinders their ability to adapt to climate change effectively.

Example: Farmers in remote regions often have no access to weather forecasts, preventing timely planting or harvesting decisions.

2. **High Initial Costs of CSA Technologies**

Adopting CSA practices, such as advanced irrigation systems or climate-resilient seeds, often requires substantial initial investment. This is a barrier for resource-poor farmers.

Example: Solar-powered irrigation systems, while cost-effective in the long term, remain unaffordable for many smallholders without financial assistance.

3. **Weak Institutional Support**

Insufficient coordination among government agencies, research institutions, and extension services hampers the scaling of CSA initiatives. Policies supporting CSA are often fragmented or poorly implemented.

Example: In some regions, subsidies for conventional fertilizers overshadow incentives for organic or climate-smart inputs.

4. **Climate Data Gaps**

The lack of localized climate data and forecasting tools limits the ability of farmers to make informed decisions. Inaccurate or generalized information reduces the effectiveness of CSA interventions.

Example: Farmers in diverse agro ecological zones require region-specific data on rainfall patterns, temperature, and soil health.

5. **Resistance to Change**

Farmers often exhibit reluctance to adopt new practices due to cultural traditions, fear of failure, or limited understanding of the long-term benefits of CSA.

Example: Many farmers continue to rely on conventional monocropping systems despite the proven benefits of crop diversification in improving resilience.

6. **Market and Value Chain Constraints**

Weak value chains and limited access to markets reduce the profitability of climate-smart practices. Farmers adopting CSA often struggle to find buyers for high-value, climate-resilient crops.

Example: Perishable CSA products, like drought-resistant fruits, may spoil due to a lack of storage or transportation infrastructure.

7. **Gender and Social Inequities**

Women and marginalized groups often face greater barriers in accessing resources, training, and decision-making platforms for CSA adoption.

Example: Women farmers in sub-Saharan Africa have limited access to credit, land, and inputs, despite being the primary agricultural workforce.

Opportunities for Scaling CSA Implementation

1. **Leveraging Digital Technologies**

The growing accessibility of mobile phones, internet services, and remote sensing tools offers new opportunities to disseminate climate-smart practices and gather real-time data.

Example: Mobile apps like *m-Agri* and *Digital Green* provide farmers with localized advisories, market prices, and CSA recommendations.

2.   Strengthening Partnerships

Collaborative efforts between governments, NGOs, private sectors, and research institutions can enhance the reach and effectiveness of CSA initiatives.

Example: Partnerships with private companies have facilitated the distribution of climate-resilient seeds and fertilizers in rural areas.

3.   Promoting Community-Based Approaches

Community-driven initiatives foster collective ownership and resource sharing, enabling the adoption of CSA at scale.

Example: Farmer cooperatives in Ethiopia have successfully implemented watershed management projects, improving soil and water resources.

4.   Expanding Financial Inclusion

Innovative financial products, such as climate-smart loans, crop insurance, and carbon credit schemes, can reduce the economic barriers to CSA adoption.

Example: In Kenya, index-based crop insurance schemes have helped smallholder farmers mitigate the risks of extreme weather events.

5.   Policy and Institutional Support

Governments can play a pivotal role in creating an enabling environment for CSA by integrating climate-smart practices into agricultural policies and providing financial incentives.

Example: Brazil's Low-Carbon Agriculture Plan (ABC Plan) promotes CSA adoption through subsidies and technical support.

6.   Empowering Women and Marginalized Groups

Inclusive extension services and policies can address social inequities and ensure that all farmers benefit from CSA interventions.

Example: Women-focused training programs in Nepal have empowered female farmers to adopt CSA practices, leading to increased productivity and resilience.

7.   Scaling Success Stories

Documenting and sharing successful CSA case studies can inspire broader adoption and provide practical lessons for other regions.

Example: The success of agroforestry projects in Kenya has influenced similar initiatives in neighboring countries.

Key Takeaways from Climate-Smart Agriculture and Extension Services

1. **Integration of CSA into Agricultural Systems**

   CSA is not merely a set of practices but a transformative approach that integrates productivity, adaptation, and mitigation. Its implementation requires holistic strategies tailored to local climatic and socio-economic conditions.

2. **Role of Extension Services**

   Extension services are vital in educating farmers, promoting sustainable technologies, and facilitating access to resources. Their capacity to deliver localized, actionable knowledge determines the success of CSA initiatives.

3. **Empowering Marginalized Groups**

   Inclusive approaches that address the unique challenges faced by women, youth, and marginalized communities are essential for equitable CSA adoption.

4. **Technology and Innovation**

   Digital tools, precision agriculture, and climate data services offer unprecedented opportunities to support farmers in adapting to climate change.

Policy Recommendations for Scaling Climate-Smart Agriculture

1. **Strengthening Extension Services**

   Governments and stakeholders must invest in building the capacity of extension services to deliver effective CSA outreach.

Actions:

✓ Recruit and train extension agents in CSA-specific practices.

✓ Incorporate participatory approaches, such as Farmer Field Schools (FFS), to foster farmer engagement.

✓ Develop gender-sensitive programs to ensure inclusivity.

2. **Promoting Research and Development**

   Continuous research is essential to develop region-specific CSA solutions that address local climatic and agronomic challenges.

Actions:

✓ Fund research on drought-tolerant crops, water-efficient irrigation systems, and conservation agriculture.

✓ Facilitate collaboration between universities, research institutes, and extension agencies to translate findings into actionable recommendations.

3.   Providing Financial Incentives

Financial barriers often limit the adoption of CSA technologies. Subsidies, credit schemes, and insurance mechanisms can mitigate these challenges.

Actions:

✓ Implement subsidies for climate-resilient seeds, organic fertilizers, and renewable energy technologies.

✓ Develop microfinance programs and low-interest loans tailored to smallholder farmers.

✓ Introduce weather-indexed insurance to protect farmers from climate-induced losses.

4.   Investing in Climate Information Services

Timely and accurate climate data is crucial for informed decision-making in agriculture.

Actions:

✓ Establish localized weather stations and data collection networks.

✓ Develop mobile-based platforms to disseminate weather forecasts, pest alerts, and CSA advisories.

✓ Train farmers on the use of digital tools for accessing and interpreting climate information.

5.   Enhancing Market Access and Value Chains

Strengthening value chains for climate-smart products ensures profitability and incentivizes adoption.

Actions:

✓ Develop infrastructure for storage, processing, and transportation of climate-resilient crops.

✓ Promote certification and labeling of CSA products to attract premium markets.

✓ Facilitate direct market linkages between farmers and buyers through cooperatives and digital platforms.

6.   Encouraging Public-Private Partnerships (PPPs)

Collaborations between governments, private sector entities, and non-governmental organizations (NGOs) can enhance the reach and impact of CSA initiatives.

Actions:

✓ Partner with technology companies to develop affordable and accessible CSA solutions.

✓ Collaborate with NGOs to implement farmer training programs and provide technical support.

✓ Leverage private sector investments to scale CSA technologies.

7.   Strengthening Policy Frameworks

National and regional policies must prioritize CSA to create an enabling environment for farmers and stakeholders.

Actions:

✓ Integrate CSA into national agricultural strategies, adaptation plans, and climate policies.

✓ Provide clear guidelines for implementing CSA practices at the community level.

✓ Monitor and evaluate the impact of CSA policies to ensure accountability and continuous improvement.

Conclusion:

Climate-Smart Agriculture represents a paradigm shift in global agricultural practices, addressing the pressing need for productivity, resilience, and sustainability amidst climate change. Extension services are central to this transformation, serving as catalysts for change and empowering farmers with the knowledge and tools needed to adapt. While challenges such as financial constraints, knowledge gaps, and social inequities persist, they also present opportunities for innovation and collaboration. By leveraging digital technologies, fostering public-private partnerships, and implementing inclusive policies, stakeholders can accelerate the adoption of CSA and contribute to a more sustainable agricultural future.

This chapter underscores the urgent need for collective action to promote CSA, with extension services leading the way. As the global community strives to achieve food security and climate resilience, CSA offers a promising pathway to a sustainable and equitable agricultural future.

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ACADEMIC LEADERSHIP IN THE 21ST CENTURY

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Abstract:

Internationalization of Higher Education in India has intensified the challenge of sustaining the global standards of quality education. The reason being, internationalization means wide diversity of students, with a forecast of greater diversity still to come and hence the nation's pressing need for truly well educated academic leaders. Education researchers and influential national reports have asserted that there is a need for constant innovation to incorporate new findings about learning which calls for a high quality faculty and consistent efforts for faculty development.

The focus of this paper is on the mutuality of academic leadership and faculty development. It is on employing strategies to raise the standards of management education through faculty development and academic innovation. For this purpose, the role of academic leaders is analyzed on the basis of three aspects namely: Leadership in Intellectual Development, Leadership in Academic Excellence and Administrative Leadership.

Keywords: Academic, Leadership, Quality Education and Faculty Development.

Introduction:

Internationalization of Higher Education in India has intensified the challenge of sustaining the global standards of quality education. Quality education requires imparting education which leads to enhancement of human capabilities and potential to the fullest extent, achieves excellence, and enables more creativity and innovation. Internationalization has led to diversity of students, with a forecast of greater diversity still to come.

Education researchers and influential national reports have asserted that there is a need to shift from a tradition based, theoretical educational process to a research based and practise oriented process. This requires constant innovation to incorporate new findings about learning, a high quality faculty with consistent efforts for faculty development necessary to support this innovation. The onus lies on Academic leaders who

head these institutions. The Academic leaders should develop a vision and employ strategies to create and further develop an

"Intellectual Capital" in the form of expert faculty. These faculty will inculcate among students, higher order cognitive skills such as critical thinking, complex problem solving, principled ethical reasoning and affective components such as self esteem and interpersonal and team skills leading to their development as a "whole person".

The focus of this paper is on the mutuality of academic leadership and faculty development. It is on employing strategies to raise the standards of management education through faculty development and hence the role of academic leaders is analyzed on the basis of three aspects namely: Leadership in Intellectual Development, Leadership in Academic Excellence and

Administrative Leadership.

What is Academic Leadership?

At its core, leadership is the capacity to release and engage human potential in the pursuit of a common cause.[16]

In creating world class institutions, the quality that the Academic heads bring to their leadership is very crucial. These academic leaders exercise their leadership within settings that have different institutional purposes, cultures and expectations from faculty, staff, students, parents and industry. To fulfill these expectations, the academic leaders are expected to operate within a framework with a vision and focus on an end objective. This should enable all the stakeholders to discover and connect with the Institutional vision, and facilitate both - individual and institutional growth. Academic leadership is then all about evoking high individual performance by all concerned - faculty, staff and students. It would also include taking decisions about the future intellectual directions in orienting research, innovative teaching, faculty recruitment and development, curriculum design and development, infrastructure and amenities which will overall enhance the academic quality. Who then are these Academic Leaders?

Academic leadership in this research paper is analyzed based on two levels:

Level 1 - Directors, Deans and Heads of Departments and

Level 2 – Professoriate – Professors, Associate Professors and Assistant Professors.

The level 1 academic leader should be instrumental in developing second line of leadership from level 2 via building a team culture, use of problem solving techniques, interpersonal skills development activities, activities leading to the development of critical

thinking in the faculty and elevating their intellectual capacities through trainings, faculty exchange programmes, job rotations, provision of sabbaticals etc. The level 2 academic leaders should in turn focus on student learning and development through planning and executing innovative strategies pertaining to the revision of curriculum, use of advanced technology in teaching, facilitating classroom learning by experiential teaching, introducing virtual classrooms etc. To be successful, academic leaders should be willing to take risks, modify their behavior and ask hard questions to themselves and all stakeholders about the barriers in bringing quality to education and make efforts to seek answers to overcome the stumbling blocks in the qualitative progress of the Institution.[10]

An academic leader needs a clear vision and an understanding of how to get where one needs to go to sustain the global competition. Unfortunately, in many institutions one or more elements required for successful and lasting changes are found missing. If the plan for change is well designed, the resources for its implementation are inadequate. If the need for change is clearly understood; those in leadership roles don't follow a well-designed process for implementation. If the resources needed for implementation of the plan exist, faculty or key support groups are left out of the planning process and as a result resistance on their part to any attempt to change. A key step of involving everyone at every level in designing individual and institutional goals and equipping each one with the required knowledge and skills to their part would lead to the process of change through innovation. Academic Leaders should bear in mind that in successful innovation, the process of change is as important as the quality of the final products. "If an innovation is to last there must be ownership. And for ownership to develop there must be participation. Developing this ownership in every one involved in bringing change is the key element for bringing about successful change."[15]

Another important requirement to bring about change for innovation and quality in an educational institution is the need to go beyond the *boundaries of positional leadership:*

"Leadership is not limited to people in certain positions. There is a need to understand that leadership is not necessarily from positional power but from the power of influence. Many are in influential roles, but deans and departmental heads are probably in more of an influential role because of access to information due to functions they are engaged in.

Rather than suggesting that now that they're in a particular position and have particular power, {faculty} need to understand they too are in influential positions since shared leadership is very important in academics because of subject strengths".[4]

We now discuss the strategies needed to be adopted level wise for achieving excellence in academic leadership.

A) Strategies to be Adopted by Level 1

Academic Leadership for the Faculty Development and Academic Excellence

1) **Alignment of Goals:** Goal alignment or the act of aligning goals in an Institute involves ensuring that both people from top to bottom in an institute and all its departments are working to achieve similar goals. There are two parts. *First*, all the people in an Institute, from the top to the bottom, should contribute to the achievement of the same set of goals -- goals that are important to the success of the entire institution. Everyone should understand how their own individual job responsibilities contribute to the attainment of institutional goals. The *second* part is largely ignored and practiced rarely. It is that each faculty has his/her own personal goals, and the academic leaders should incorporate these personal goals of the faculty into the Institutional goals. Academic Leaders should help the faculty understand that their personal goals are a part of the larger Institutional goals. Though the process may be time consuming, the end effort will have a high payoff in a way that after the achievement of their personal goals per say pursuing higher education, deputation to foreign institutions as subject experts etc, will elevate them intellectually.

2) **Empowerment of faculty:** Empowerment is giving an individual the opportunity to grow and to use his or her experiences to contribute to the decision-making processes of the institution. Parmar (2003) defines empowerment as the process in which one discovers internal strength and the ability to influence change within one's organization. Empowerment is not granted overnight. Empowerment involves a personal evolution incorporating experiences that shape each person's identity. Parmar notes that first the individual needs to develop a sense of self and a sense of his or her relationship with others. Next, active participation in the process of considering change and enacting change needs to take place. An effective leader must provide the opportunity to develop and hone critical thinking skills so that the individual can have the tools needed to resolve problems and conflicts.[18]

To empower faculty, an academic leader can consider how he or she will be able to energize the team and inspire individuals. Fazzi (2008) wrote about the effectiveness of motivation through hope, vision, meaning, and purpose. Gersh (2006) wrote about how R. Greenleaf introduced the philosophy of servant-leadership as a conscious choice to place others' needs as the highest priority. According to Gersh, Greenleaf asserted that leadership grows out of service and that effective leadership is measured by whether those the leader serves become more autonomous as they become more likely themselves to serve. In doing so, the effective leader empowers the team members.[6]

Empowerment of faculty begins with the leader. Many different leadership theories and models are appropriate for the empowerment of faculty but servant leadership, as outlined by Greenleaf (1977), provides the support and encouragement necessary to build a community of leaders within the educational institute (Laub 1999). "Servant-Leadership intends to empower employees, students, and citizens, emphasizing the roles of service, support, stewardship, and facilitation in leadership" (Hays 2008, 113). A vision of what empowerment must first be developed before implementation can take place: this means the servant leader must first understand the faculty and know the needs of each. Yet awareness of the needs of others is not the soul focus of the leader. Servant-leaders must be acutely aware of personal needs as well as the needs of others, and be mindful of what may be happening in the immediate and broader environment before being able to empower faculty (Hays 2008). This concept of servant leadership emphasizes the interests, personal and professional development, and the empowerment of followers which ultimately leads to achievement of a shared vision for the organization. (Gersh 2006). [7]

To inspire and empower faculty, the servant leader must take an active role in the organization, discovering the weaknesses of the existing system, and inviting others to participate in the development of a community that shares power and a collective vision. By promoting participative decision making, the servant leader builds the confidence of faculty and helps develop self-efficacy, with the process allowing leaders and followers to raise one another to higher levels of motivation and achievement (Humphries 2005). Servant-leaders have a role unlike traditional leadership. Servant leadership promotes the development of people through the sharing of power and community building (Laub 1999). These leaders do not push faculty or make demands, but instead pull faculty, guiding each person to a higher level of achievement. A servant

leader offers support and guidance, invites faculty to participate and take the role of leadership alongside the servant leader, and encourages faculty in personal fulfillment and development. Servant leaders spend time discussing issues and listening to what others say. The servant-leader persuades and influences faculty by discussing what matters, what is important to the leader, and why, while in turn hearing what is important to the followers and why. "The servant-leader is always concerned about doing the right thing for the greater good" (Hays 2008, 124). [9]

Academic Leaders should empower their faculty and thereby the institute. Through a clear vision, and empowerment, the leader will be able to set high expectations for performance for the faculty. The Academic leaders can empower the faculty in three ways: 1) empowering them with knowledge, education, training and research, 2) empowering them with technology, information and expert systems and 3) empowering them with delegated authority to act. This empowerment coupled with consistent and a valid accountability from the academic leader would enable the faculty to grow both on the personal and professional

front.

3) Intellectual Development:

The most important criteria for a good institute to become globally competitive on a sustainable basis are the creation of an "intellectual capital". Academic leaders should inculcate a research orientation and a thirst for knowledge among faculty by appropriate motivation strategies in the form of rewards and recognition. This is because the output of faculty research becomes the input for class room teaching. This enhances the effectiveness of the teaching- learning process and also does away with the mediocrity of faculty fraternity.

Besides this exposure of faculty to national and international seminars, conferences reading, writing and publishing papers would surely enrich the institution with Intellect.[2]

4) Faculty exchange recharge programmes:

Deputing faculty to foreign institutions as experts and inviting foreign faculty to the Indian campus would prevent faculty from growing intellectually stale and create vibrancy, dynamism. Deputing faculty to foreign institutes would expose them to the various educational cultures internationally. This would groom their teaching skills to cater to the International educational needs and standards. In some respect, faculty-

staff exchange programs are like sabbaticals for the personnel involved and, as with sabbaticals, benefits accrue to both the individual and the institution.

5) Revision of Salary and Employment Conditions:

Faculty development demands providing better research facilities creating more teaching fellowships and better service conditions. In order to attract more qualified and meritorious people to join teaching it is important to have compensation packages which match other industries. The salary structure needs to be competitive and linked with performance. Creating better working environment for faculty by providing facilities like- flexible working hours, sabbaticals, job rotations, scholarships for research and development based on performance would also be fruitful.

B) Strategies to be Adopted by Level 2

Academic Leadership for the Student Development and Academic Excellence:

To cater to the nation's pressing need for truly well-educated graduates, Academic leaders have to play an instrumental role in making the intended student outcomes richer than they are now and expand student learning to include higher order cognitive skills, critical thinking, complex problem solving, principled ethical reasoning and developing their affective components such as self esteem and interpersonal and team skills. Together these outcomes can lead to the development of the student as a "whole person" who then could be successful as a professional and be able to contribute as a citizen. For this, both the academic leaders and faculty should create an informal and learning atmosphere for all.

1) Faculty as facilitators: Learning can be defined as occurring when we change or elaborate what is already known to us (Cambourne 1990). The learning process can be defined as "...making connections, identifying patterns, organizing previously unrelated bits of knowledge, behavior, activities, into new (for the learner) patterned wholes" (Cambourne 1990, p.12). The philosophy underpinning Cambourne's (1990) definition is that the learner is actively involved in the learning process. The learner is constructing his/her view of the world and constructing ideas. They are interacting with materials, directing processes, making connections, identifying patterns and organizing materials. All of the learning is linked to existing knowledge. The learners are not passive; they are not receiving pre-digested or organized materials. The definition does not focus on what is to be learnt but on how the learning occurs. This approach to learning means that the important aspect of lecturing is not imparting knowledge (although this is important) but

in creating opportunities for students to learn. This is the role of the teacher as facilitator and this is

consistent with the liberal/progressive orientation to curriculum.[3]

In order for the faculty to facilitate student learning several things need to occur. The processes that the faculty as facilitator needs to undertake are as follows:

a) **Assess the students:** This aspect can be seen as 'getting to know' the students. The student's willingness and ability to learn are key to developing learning opportunities that will engage the students.

b) **Plan the learning**: Following student assessment the faculty is in a better position to plan learning opportunities that will provide a fit with the student's needs and interests and thus optimize student learning opportunities.

A part of this process is to determine student learning outcomes. Harrison (1998a & b) has presented the ***S.P.A.C.E. model*** for creating optimal learning conditions. The conditions for optimal learning include the following: [8]

Self-affirmation – the learner's view themselves as effective learners and the faculty provides them with feedback to that effect;

Personal meaning – the learners are able to find personal meaning in the learning. That is, the learning is relevant to them;

Active learning - the learners are active in the learning, whether that activity is physically doing something (as for concrete learners) or intellectually doing something (as for abstract reflective learners).

Collaborative – the learners are able to collaborate with others in the learning process and not to view learning as an isolating experience;

Empowering – the learners are able to shape the learning process, to have control over what is learnt and the direction of the learning.

Implement the plan: This will include the classroom management and the teaching strategies that will cater for the varied learning styles of the students. It will also include the emotional climate and quality of the interactions in the classroom

Evaluate the process: At the completion of a classroom session there will be an assessment of the learning that has taken place. The emotional climate will be subject to continual evaluation so that any problems identified will be dealt in a judicious manner.

2) Shift from the Traditional to the Non traditional methods of teaching: To bring this shift, there is a need for the faculty to shift from the traditional to the non-traditional

methods of teaching. Faculty has to adopt insightful teaching strategies and participative methodologies which provide and support enhanced teaching and learning environment in higher management education.

In the late 1980's national attention began to focus on the quality and outcomes of university classroom teaching. Paralleling this emphasis has been a growing body of pedagogy centered on non-traditional teaching and learning techniques. These include "Active Learning" (Ebert-May *et al.,* 1997, Tanenbaum *et al.,* 1998), "Collaborative Learning" (Tanenbaum *et al.,* 1998), "Cooperative Learning" (Johnson and Johnson www.clcrc.com, Herried 1998, Lancaster and Strand 2001), Problem-Based Learning" (Edens 2000, Major and Palmer 2001), and "Small Group Teaching" (Rubin and Herbert 1998, Potthast 1999). Collectively these teaching techniques emphasize:

1. Self-directed student learning,
2. Cooperative learning in small student groups,
3. Teachers as facilitators or guides,
4. Problems, critical questions, and case studies as the organizing focus and stimulus for learning,
5. Problems, critical questions and case studies forming the basis for a comprehensive understanding of the subject matter,
6. Acquisition of critical thinking, speaking and writing skills.

No single technique is universally applicable in the classroom. First, faculty must identify their teaching and learning goals and objectives for each course. Then the appropriate nontraditional strategies may be selected, developed and implemented. Included in implementation must be carefully selected or designed assessment tools linked to the specific goals and objectives of the course. The body of research and evaluation investigating these teaching methods has revealed higher achievement and productivity (Potthast 1999, Alexander 2000, Herreid 1998, Lake 2001) relative to traditional teaching models of lecturebased individualistic learning. According to the literature, students can be expected to:

1. Acquire enhanced problem-solving skills,
2. Develop self-directed learning skills,
3. Develop the ability to find and use appropriate resources,
4. Develop critical thinking skills,
5. Develop a measurable knowledge base,

6. Demonstrate increased performance,

7. Enhance social and ethical skills through team work,

8. Achieve greater psychological health and higher self-esteem,

9. Become more self-motivated,

10. Develop oral and written communication skills,

11. Develop proactive thinking,

12. Develop academic skills in congruence with workplace skills.[14]

3) Out of Class Learning: Academic leaders should cater to out of class learning via industry internships, industry based projects, national and international social competitions, 24 hours dialogue with the faculty, a Wireless Laptop for Every Learner, expansion of a Wireless Infrastructure, and provision of technical experts. Out-of-class experiences to valued outcomes of higher education, include (a) cognitive complexity (e.g., critical thinking, intellectual flexibility, reflective judgment); (b) knowledge acquisition and application; (c) humanitarianism (e.g., interest in the welfare of others); (d) interpersonal and intrapersonal competence (e.g., self confidence, identity, ability to relate to others); and (e) practical competence (e.g., decision making, vocational preparation) (Kuh, 1993).[13]

Faculty should influence out-of-class learning environments by the nature and amount of academic work they assign. To link the curriculum and academic goals more closely with student life outside the classroom, faculty can structure assignments that require students to illustrate how they are using class material in other areas of their lives, use active learning and other effective pedagogical strategies, hold students to high expectations, and indicate clearly what they must do to succeed academically. Students also must take responsibility for their own learning when they participate in out-of-class activities and events that enrich the educational experience (e.g., orientation, guest lectures, internships etc).

4) Marking Scheme: Marks are one of the main means of signifying the level of learning of the students. However, marks do not communicate much information about the kinds of complex, cognitive, affective and motor learning. Academic leaders have to design a marking scheme that would besides learning represent attendance or participation of the student in class activities his/her cognitive achievement, his/her critical thinking skills etc. This would ensure better student engagement and improve employability skills.

5) Congenial Climate: Climate is the emotional feel of a campus, department or course. Do students feel welcome, intellectually stimulated, emotionally and socially supported is required to be studied by the both level 1 and level 2 academic leaders. The quality of campus climate co-relates with the student learning. Level 1and 2 academic leaders need to manage the campus climate deliberately and carefully if it is to become a valuable tool for supporting learning among students.[1]

6) Academic Advising: Based in the teaching and learning mission of higher education, is a series of intentional interactions with a curriculum, pedagogy, and a set of student learning outcomes. Academic advising synthesizes and contextualizes students' educational experiences within the frameworks of their aspirations, abilities and lives to extend learning beyond campus boundaries and timeframes.[17]

To improve students learning and development with due consideration to their cultural diversity inadequate academic preparation for higher education, the inability of the parents to guide hem when making important decision or in conductive campus climate etc, the level 1and 2 academic leaders should provide students academic advising, "Modern academic advising is developmental rather than prescriptive" (Gordon, Habby & Associates, 2000) Each student develops a relationship with a faculty advisor who gets to know the student and mentors him/her. An institute, serious about learning will invest significant resources and effort in modern, developmental academic advising relationship to guide development monitor attitude and effort and ensure that significant learning is occurring for each person.

Even UNESCO, has highlighted the importance of academic advising and states that it fulfills the following purposes:

1. Developing educational plans consistent with their life goals.
2. Provide accurate information about academic progression and degree

requirements.

3. Understanding academic policies and procedures.
4. Access campus resources for enhancing their ability to be academically

successful.

5. Overcoming educational and personal problems.
6. Identify systemic and personal conditions that may impede student academic achievement and developing appropriate interventions.

7. Use data about students for academic and educational needs performance.

8. Increase student retention by providing a personal contact that students often need, thereby connecting them to the institution.[19]

7) Internationalization of Curriculum: Internationalization of the curriculum is defined here generally as an effort to introduce an international, intercultural or global dimension into course content and materials and into teaching and learning methods. In the context of internationalization, new ways of thinking about curriculum have become necessary. This suggests a curriculum approach that seeks to provide students with skills of inquiry and analysis wherein students are able to identify the sources of knowledge and explore its uses and applications to meet the global requirements. Both the level 1 and 2 academic leaders should adorn the **"Live Local and Learn Global Initiative"** to revise, implement and evaluate the curriculum to suit the global needs. The Indian management institutes can create "Global learning networks which will support joint online curriculum planning and teaching between teachers in classrooms in different parts of the world, sister classrooms, global buddies and more extensive student exchange programmes.[12]

The curriculum content should not arise from a singular cultural base but should respond to the needs of both the local and the global community. It should encourage students to explore how knowledge is produced, distributed and utilized globally. This would require he faculty to undergo trainings for the effective revision, implementation and evaluation of the curriculum. International partnerships greatly facilitate international learning on campus. Classic bilateral partnerships involving student exchange and faculty research have proved critical to support study abroad and foster international mobility among faculty members, especially when linked to their research interests. International exchanges challenge students to think critically about their discipline in a global context and encourage faculty members to think differently about their field of expertise. International experiences not only lead to greater dialogue and intercultural responsiveness, they also act as a catalyst to adjust teaching methodology and examine curriculum. Consequently, curriculum development often emerges as an outcome of partnerships.[11]

Administrative leadership includes a variety of positions that involve managing groups of various sizes and compositions such as trustees, departments, administrative office etc. Mostly administrative leadership involves hiring (and sometimes firing),

resource allocation, alumni engagement and managing the changing and complex roles of faculty, staff and students. Administrative leadership is critically important because of the impact it has on academic program, faculty, staff, and student body. [5]

Conclusion:

To conclude level 1 Academic leaders have to play a crucial role in the development of the level 2 and level 2 academic leaders - professoriate in turn would contribute in the intellectual development of students to groom them into responsible global citizens and best fit for society at large.

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LIVED EXPERIENCES OF CHILDREN RAISED IN RECONSTITUTED FAMILIES AT A SELECTED RESIDENTIAL AREA IN ZIMBABWE

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Abstract:

The study explored on the lived experiences of children living in reconstituted families at a selected residential area in Zimbabwe. The researcher focused on all the aspects of the whole person concept of the child by taking a glance into the social, spiritual, physical, biological and the psychological wellbeing of the child and factors that nullify their wellbeing. The research focused on the violations of children's rights in step homes or reconstituted families, as well as the difficulties they encounter. The researcher manipulated the qualitative method for it was deemed helpful in gathering imperative information. Purposive sampling was used in a qualitative study to pick sixteen participants from the target group. Information was gathered through key informant interviews, in-depth interviews and focus group discussions. The researcher manipulated data cleaning method whereby unnecessary information was left behind in order to provide insightful and enriching information and data. The researcher heard the plight of step children and most of the findings imparted that step parents are the main cause of their sorrows. The researcher noted the violations of children rights in the reconstituted families and how children are being treated with acrimony and coldness by vicious step parents. After deep cogitation on the negative impacts or problems faced by children the researcher came up with recommendations or possible solutions to try to minimise problems faced by children and these include intensification of support strategies by social workers that cater for children welfare, formulation of robust laws that are inclined to child protection and safety, giving out projects to the needy step children living under deprivation and Improving access to basic needs for children.

Introduction:

The UNCRC (2018) proffered out stipulations on the rights of children on a global scale which consist of about 54 articles which include cultural rights, economic rights, civil rights, social rights and political rights. The UNCRC (2018) articles clearly insisted on the core principles which work in line with child protection such as devotion to the best

interest of the child, the rights to life, respect of the views of the child and lastly the right to survival and development.

Moreover, the drafting of the UNCRC seems to be very much paradoxical to the children because it was drafted without the presence of children source therefore contrasting their principle of participation. Globally as compared to Zimbabwe, it is estimated that in America 113.6 million Americans have step relationships therefore this clearly impart that there is need of placing an eye on welfare of step children living in those reconstituted families to ensure that child development is taking place in a good way. More so source it is imperative to note that children who lives under the tutelage of their step parents they have serious social or emotional problems. Children under the age of eight have no real grasp of their rights, yet severe treatment causes regression and behavioural issues including improper toilet sitting and poor academic achievement since stepparents may not be able to provide the extra care that is required (Drajea, 2015).

The concept of children under the tautology of step parents has become predominant in the region of the Southern Africa with researches and findings depicting that 40% of children lives under the custody of a step parent (Legal Assistance Centre, 2011). Stepchildren lack control over their lives and this results in abusive lives out of fear of being branded as enemies of their new step parent. Even in the presence of the biological parent some of the step children continue to live in aguish because sometimes the biological parent will be really infatuated with new step parent and all their actions will be controlled at the expense of the step children .Most of the times the step children end up being the victims of physical and emotional abuse and sometimes viewed as enemies of the step parent(Niina,2015).Children living under the guardianship of a Step parent they are prone to numerous forms of abuse and most of them they have low self-esteem .This clearly imparts that there should be monitoring and also effective intervention to make sure that all children do not get deprived of their rights in the process working in line with the values of the Ubuntu which are paramount source.

Theoretical Framework

Ecological systems theory

It is conspicuous that numerous theoretical frameworks that explore more on families have been put forward but this research will use the ecological systems theory which was initiated by Bronfenbrenner (1970). The theory considers the family as a social structure. The family structure comprises of unique parts for example the one called

immediate family (the reconstituted. one), the prior family (the one that existed before divorce), extended family (the one that is influenced by relatives) and lastly the community they reside. Bronfenbrenner (1970), separated these into the, mezzo system, exosystem, macrosystem, micro systems and chronosystem

The ecological system clearly helps in pinpointing how family is interconnected emotionally and it really helps in imparting the effects of families that are not enamoured to each other for they are regarded as dejected families henceforth this makes it discernible that most of the problems that step children face in reconstituted families is because of feeble emotional support amongst each other. The Bronfenbrenner theory shares some characteristics with the Bowen's family systems theory for they all appreciate that the disturbance of any family interaction can be detrimental to the family day to day communication and also their social life. Robertson (2014) postulates that most of the times family members living at the same space constantly seek for each other's support and attention. Henceforth one can easily say that the behaviour of the step children cannot be attributed to them alone but one has to be in cognisant of the other family behaviour as well. It is pertinent to note that this theory is of greater importance for it clearly analyses the communication patterns amongst the family members and it also reveals tension between them and this can be atrocious for step children for they are prone to abuse in many different forms.

The theory is helpful for observing and assessing interactions inside the family and their surroundings, taking into consideration reconstituted families' communication habits, and observing resource allocation and how they are mobilised. The ecological systems theory is predominant for revealing on how the multiple levels of the surroundings of the child can affect him or her for example school settings, laws, customs and cultural beliefs and the realisation of these effects can be useful in trying to improve the child development in all facets that a child requires cite source .More so, the ecological system theory is imperative because it takes cognisance of the child and their immediate environment and also considers the internal and external environment in child development. This theory is imperative for it tries to give honest and accurate findings which are not biased because of its flexibility of using other family members on watch.

Utilising this theory implies that additional and valuable data will be gathered smoothly without facing any impediments therefore in the process enabling active involvement of imperative parties who can render help in the process of addressing life

being experienced by step children. To stop the issues being experienced, preventative steps are proposed and will be manipulated in this research. A holistic approach will be opted in order to give a multifaceted solution to above stated social problems. The system theory is helpful to social workers as they try foster unity, relationships amongst social systems that respect variety, and connections between individuals and potential resource systems source. Additionally the ecological system really aids in shading light on how the child behaviour influences the behaviour of those around him or her, therefore suggesting that positive behaviour from the step children leads to reciprocation of a positive behaviour from the step children discuss each theory separately; Consequently, this theory is appealing to social work department that deals with children to foster good behaviour in them in order for them to be treated the same way. Bronfenbrenner alluded that the parent child relationship do not just occur in a vacuity but rather they are embedded in greater or larger structures.

Research Methodology

For this study, a qualitative research methodology was manipulated and employed in trying to gather imperative information on the lived experiences of children raised by step parents.As defined by Creswell (2014), a qualitative approach is a method for identifying interconnections or correlations between human systems and whatever problems they encounter in their natural surroundings through an extensive examination of the material that has been provided.By internalising a qualitative technique, the researcher was able to draw conclusions from the data collected from the respondents that were both helpful and relevant (Ritchie and Lewis, 2003).The qualitative method was also useful in the sense that it unlocks the door to significant information unlike the quantitative methods which can be limited at times for example the qualitative research enables the researcher to use his or her diplomatic ways and also creative ways in trying to gather useful information for instance the researcher can use probing techniques.

The qualitative method was also deemed necessary by the researcher because it really helps in studying behaviour and also helps to explain it through rendering deeper understanding of unique experiences and also phenomena (Patton 2011).Utilising the qualitative method was justifiable taking into account that this research is a social one and it also encompasses the vulnerability of children , thus it is of greater essence to use qualitative method as it enables the researcher to gather significant voluminous information and data. The hidden information pertaining the lived experiences of step

children was made conspicuous and this can all be attributed to the qualitative research method. All participants' views and echoes well all taken into consideration thus obtained information was unbiased and was full of facts and transparency. It was essential to give opportunity to children to hear their plight and also for them to air out their views and also their best interest concerning their fantasy life.

Target population

The target population were step children and all the conclusions were derived from them. Children Agencies such as child care workers played an indispensable role as a cursor to all step families by rendering their location details such as house addresses.

Sampling

Sample size

The sample size included 16 people as study of interest in trying to gather information, therefore sample size will only be 16. Therefore ten willing step children from different families participated and two of child care workers and another two foster parents will act as key informants, lastly two of child protection technocrats will be also present.

Data collection methods

It is imperative to note that in this research the researcher manage to partake in the use of in-depth interviews, key informant interviews and focus groups as data collection techniques.

Data analysis

The researcher executed the thematic analysis style whereby the researcher go through all the collected data in the quest to look for patterns and the meaning of data to uncover or reveal themes. According to Nueman (2012) thematic analysis is the isolation of the fundamental themes, understanding, explanation and meanings of the respondents' responses. All the raw data without being tempered with collected was grouped in the different categories depending with their contextual themes in order to allow rational analysis to take place.

Literature Review

The experiences of step children are slowly becoming an orthodox in the contemporary societies due to similarities of the problems that step children go through in blended or reconstituted families. According to the Committee on the Rights of the Child (CRC) research finding it concluded that on 20% percent of children living in reconstituted

families are happy and complacent with their day to day life. Stepchildren have increased as a result of a failed previous marriage and the unwillingness of family members to care for one's children (Mupfumira, 2017.On a different note, every child have the legal right to care and access to fundamental services, according to Children's Act Chapter 5.06. According to the 2013 Zimbabwean Constitution, any problems relating to the welfare of children will be addressed in light of the resources that are accessible to both the nation and the parents. As a result of these differences, children are unable to fully enjoy their rights, especially given that the government as a whole is struggling financially. Single parents or widows were coerced to marry available single relative to make sure that the safety of children of the clan will be in safe hands. According to Mansell (2011) stipulates that step children are viewed as people with bad intentions towards the step parents. The writer continued by stating that stepchildren are viewed as disruptive disloyal, and hostile to the step parent, which opens the door for a rift in loyalty and make it challenging to exert control over step children. According to Niina (2015), stepchildren are regarded as something that divides since there is a propensity for favouritism towards other children and because they are handled differently from biological children.

It is imperative to note that the partners in the reconstituted families they face numerous problems which also affects their social function. Adults remarry for a variety of reasons. According to Murdock's (1949) theory, adult personalities are stabilised through the formation of relationships like families. Some people believe that getting married will help stabilise their socioeconomic issues, however this may not be the case given the declining economy, the burden of family obligations, and the encumbrance of stepchildren (Mupfumira, 2017). According to Murambinda (2019), step parents experience identical challenges as other households do because a number of these problems are a national concern, such as the deteriorating state of the economy. Step parents are subjected to unfavourable stereotypes as well, which could motivate them to act coldly and viciously because they would find it distressing to be branded as "evil." Some step parents change their conduct and mind set towards stepchildren as a result of social pressure, which makes the kids more vulnerable (Fieldman, 2006). Sometimes the step children can also be a separating factor amongst the step parents for instance a stepchild can partake in a conspiracy in order to make sure that the relationship fails. According to Murambinda's findings (2019), the durability of a union is strongly influenced by the hospitality extended to a new step parent by family members or other significant figures in one's life in the vast

majority of African countries. In some of the cases the step parents they end up getting dreadful names and labels from the family relatives for example they end up being called witches especially women step parents. In many cases step parents fail to curb deviant behaviour of their step children in the reconstituted families for they fear the judgement from the society therefore they desist from all forms of corporal punishment.

Research Gap

Even though there was much incrimination on the literature of the children living in reconstituted families there are many apertures such as the contribution of the roles that are played by step children in the formation of the reconstituted families. Many scholars such as Graham (2010) solely focused on the roles of the step parents and how they contribute negatively in the reconstituted families. Unlike Mupfumira (2017) who focused on the motives behind the emergence of the blended families, this research went further by taking step children rights into cognisance and it also rendered measures which can be employed in order to promote impeccable social welfare of children. Some scholars also focused on the structures of the reconstituted families but most of the information was euro centric which was only applicable to the western countries. However this study is going to render much information on the African perspective.

More so another imperative research gap when it comes to the lived experiences of children living in reconstituted families is the complexities of this social phenomenon. Most of the valid scholars failed to come up with enriching information pertaining how social ties in reconstituted families are disrupted attributing it to one special cause. Therefore the fact that there are still apertures when it comes to the lived experiences of children living in reconstituted families gives the researcher an enthusiastic perspective in the quest of revealing all the detriments of the reconstituted families.

Results

Demographic Characteristics

The table 1 below displays the demographic characteristics of respondents

Table 1: Demographic characteristics of respondents

Number of respondents	Educational level	Age	Non other children
16	Primary (4)	9-12	Key informants (2)
	Secondary(6)	14-18	Step parents (4)

Emotional abuse and social disconnection

Children are fragile beings that can be easily affected by petty issues and therefore it is imperative that all actions that affects them should be done in a positive manner. Just like adults also children suffer from mental problems that affect them emotionally and this disrupts their social function and it also spear heads social disconnection from family and also close friends. Poor parenting from step parents in the reconstituted families jeopardises the emotional state of the child and also leads to low self-esteem. Derogatory language can be vicious to step children and also make them too sentimental. Here is some of the information that was shared by the abused step child;

"Sometimes I will be in a euphoria mood but the harsh words that I receive from my step mother they destroy me for instance this other day I was watching cartoons and my step mother did not like that I was quite relaxed so she shouted hey your stupid kid who don't know to read go and read than just sitting there wasting time. I felt that the words she used were not proper and they really affected me"

This clearly indicates that there is no the biological parent who can be the shoulder to lean on and also who understand that children also need time to relax on their spare time. From the above statement the child is not disputing with the step parent about reading only but she just needs her step mother to use good language that clearly show veneration. More so we can see lack of love and caring from the step parent and that is depicted by the use of informal language.

Failure to create robust relationships and working relationships

For the child to grow he or she needs parental support socially, financially and even spiritually. When children fail to create a robust relationships with the parents they are prone to a lot deprivation which can also spearhead abuse in several ways. It is pertinent to note that most of the step children they really find it difficult to adjust to new environment and also to new reconstituted families they end up relinquishing on their family affection. More so also on the parent side it is a cumbersome task to create working relationship with the non-biological child due to their negative attitude and stereo types beliefs. When a child fails to create a good rapport it is difficult for them to disclose or confide their sensitive issues due to the fear of being ridiculed at and this can be detrimental for the child for they end up suffering from mental health problems such as depression and anxiety disorders. Most of the step parents in reconstituted families finds the silence of the step child as

annoying and also suspicious due to the fear of being betrayed. The following were the sentiments of the child:

"I really find it difficult to talk to my step father because he always judge me and doesn't understand my plight, This is affecting mostly because sometimes I end up depriving myself of some basic needs for example this other time I was really sick but I had to pretend like I'm okay and healthy because I knew my father is not a receptive man especially to my medical concerns. Also the other thing that causes myself to be distant to my step father is that he is not an approachable man he is always wearing a frowned face and he also easily gets annoyed with petty things, so I just realised that not talking to him is very beneficial for it helps to preserve peace.

The above information clearly gives a vivid picture of how feeble social ties can promote child problems especially psychological ones. The disgruntled child clearly makes it clear that She is suffering from deprivation of many basic needs just because of the father who is hard approach and also judgmental. The child is always imparting reactionary behaviours such as contemplating about her past that used to be milky and peaceful. The fact that the non-biological parent fails to replicate the love that was once provided by the biological parent makes it difficult for the child to be attached to new parents.

Favouritism to the biological children and unbalanced love

From the focus group findings the researcher discovered that a lot of favouritism was prevalent in the reconstituted families. During the focus group the participants were asked if they experienced favouritism in the reconstituted families and they all nodded their head simultaneously. Favouritism can be vicious to the relationships of the non-biological child and the biological child. More so favouritism can also be a tremendous factor in the disruption of working relationships among the child and the parent. As argued by participants in the Kuwadzana community Step parents they fail to balance their treatment of the biological parents and the non-biological parents especially when it comes to financial help, step children are always the last priority when it comes to sharing of finances. The participants further testify that most of the times they ask form money they are deemed as nagging people and egocentric people but the situation changes when the biological child ask for money. One of the alarmed key informant from the CCW shared the following thoughts:

"Most of the step children they suffer from diluted love and fake love from the step parents who only seem to care when they are around neighbours and also bystanders. Most

of the community people they witness favouritism but they have no say for they fear that they will end up breaking existing relationships and also making matters worse."

The remarks from above clearly impart that step children in reconstituted families are being placed at the periphery when it comes to their priorities and they suffer from inequality on daily basis. Favouritism is also one of the hurdles that impede step children from development since all focus will be on the biological children. Favouritism also hinders the child to live according to International standards for child protection which stipulates that the child should; enjoy, be safe, be healthy, achieve and economic wellbeing. Providing balanced and equal social care was proven to be a difficult thing for the step parent due to the fact of failing to come to terms with the reality.

Sexual abuse and Physical abuse

It is pertinent to note that the prevalence sexual abuse and physical abuse was ghastly to the researcher. Female stepchildren, particularly those who are adolescents, were found to be particularly susceptible to child sexual abuse. Stepchildren could not receive the required care and attention to critically notice any signs of child sexual abuse that the youngster might exhibit by the biological parent. In addition physical abuse also proved to be also rampant in the reconstituted families for example the corporal punishments from the step parents were done out of spite.

FG1	My step father always come in my room at night and he does not even knock the door and it really annoys me and I'm always living in fear that one day he might just force me to sleep with him, I can't tell my mother because he always threatens me each and every time I try to bring that issue.
FG2	Every time I make a mistake I'm severely punished even though sometimes I make trivial mistake such as spilling out water from the bucket and I got a heavy punishment for that I was almost butchered last week and I was also contemplating about deserting home because of these inhumane acts from my step mother.

The researcher denoted that the absence of the biological mother is the one significant factor that is really spearheading sexual abuse. Children are suffering from abuse because they don't have anyone to tell when the abuse will be in initial stages and also they lack information on how to evade it. Also the absence of the biological mother makes it difficult for abuse to be discernable through indicators such as change of

behaviour and also attitudes. More the researcher also noted that the neighbours fails to play their role of checking up on the stepchildren regarding to the way they will be living.

Discussion of Findings

In midst of the research the researcher discovered that stepchildren were more likely than biological children to be subjected to unfair domestic discipline. This is consistent with what Niina (2015) discovered when she hypothesized that stepchildren were perceived as a dividing factor and so targeted by the stepparent. If the wife was equally empowered to provide for the family, the scenario would be slightly different. Having said that, less strong women who bowed to aristocratic pressures found themselves unable to defend their own children and switched their affection to the children of their spouses.

Favoritism of the biological children was more prevalent in the research. The existing of the inequality in the reconstituted family in terms of support rendered was significantly rampant at the expense of the step children. According to Evans (2002) inequality creates a gross of social division and disrupts harmony. Step children are suffering for their biological parents mistakes even though they are innocent souls they continue being sabotaged.The study found out that compromising between the step parent and the step child in the reconstituted family was almost an impossible task due to the prevailing of the inequalities.

Several problems such as discrimination were discovered in the midst of the research by the researcher. According to the oxford dictionary discrimination is defined as the unjust or the prejudicial treatment of different categories of people. Discrimination propelled due to the differences of the members of the family for example surnames. Discrimination emanated from the basis that the wife did not feel entitled to children of her husband, she was very opinionated when it comes to the non-biological. The fact that the step parent could not venerate the stepchild this also lead to the reciprocation of hate to both sides. The researcher noted that discrimination is one of the impeding factor to family affection and thus the family is always stagnant.

Conclusion:

After the researcher gathered all the imperative information on the lived experiences of children living in the reconstituted families. The researcher heard the plight of step children which almost seems inevitable in the reconstituted families. Child sexual and physical abuse was more prevalent due to the treatment with indignation from the

step parents and this was a tremendous factor in developing children with low self-esteem since they are living in trepidation on daily basis. This phenomenon of the reconstituted families is more likely to get more prominent in Zimbabwe due to rapid rise of divorces in the country due to socio economic reasons and also due to unchaste of partners. The majority of the children in mixed households displayed signs of mistreatment, correlating with the information gained from in-depth interviews. Therefore the researcher concluded that robust integrated methods of social work can be vital in promoting the welfare of children living in the reconstituted families for example improving access of the basic needs, formulation of robust laws, increased awareness or sensitisation of child rights and lastly giving out projects to the needy children.

Recommendations

- Government should build more child welfare infrastructures that renders welfare services in local areas so that every community have access to those services. They should also make sure that service is rendered to the right beneficiaries rather than people with ample resources or options.

- Stepchildren ought to increase their engagement in child rights sensitization workshops and be provided with good living skills in a reconstituted family setting. This equips them to be able to evade trouble.

- Social workers should work sprightly in ensuring that all children needs are met through provision of good conducive environments for assessments. For example they can partake in interviews and make sure that they are confidential.

- Step parents need to be patient and they will naturally gradually grow into their role rather than forcing being an impeccable step parent which is more farfetched . That can be imperative in building good rapport between them and the non-biological child. If they find it a daunting task they should seek for help from the therapist.

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FACTORS DETERMINING RISK TOLERANCE OF INDIVIDUAL INVESTORS

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Abstract:

A Risk tolerance is the degree of risk that an investor is willing to endure given the volatility in the value of an investment. An important component in investing, risk tolerance often determines the type and amount of investments that an individual chooses. Researchers, particularly economists, have been fascinated with the construct of risk for a long time, resulting in its profound dissection. Game theorists have thrived on the concepts of risk and return in different rational decision-making situations. In fact, John von Neumann and Oskar Morgenstern invented a theory that measured how much an individual is desirous of a return, by the size of the risk she is willing to take to get it (Binmore, 2008, p. 8). Cox and Rich (1964) identified the economic cost of acquisition as the most commonly discussed element of risk. Later, Jacoby and Kaplan (1972) broadened the horizons of the definition of risk and suggested five independent types of risk: financial, performance, physical, psychological, and social. The present study pertains to the financial risk tolerance of an individual as indicated by their preference for different investment options – from the more risky ones to the less risky ones. Grable (2000, p. 625) defined financial risk tolerance as 'the maximum amount of uncertainty that someone is willing to accept when making a financial decision.' The construct of risk tolerance, or an individual's attitude toward accepting risk, has implications for financial service providers as well as consumers. For the former, a proper assessment of a prospective investor's financial risk tolerance enables them to design a heterogeneous but appropriate product mix of investment options (Jacobs and Levy, 1996), while for the latter, it aids in offering customized asset composition in a portfolio such that it is in accordance with the risk and return expectations of the individual (Droms, 1987).

Keywords: Risk, Risk Tolerance, Financial Risk Tolerance, Demographic and Socioeconomic Factors

Objectives for the Study:

To Study Factors Determining Risk Tolerance of Individual Investors

Methodology

The study is conducted through Secondary Data

Problem Statement:

Most investment managers do not assess the risk tolerance level of the client so the investment plan which they develop fails to meet their requirements. As a result, the clients hesitate to make further investments. However, making investments is vital for economic growth so it is necessary to encourage people to make investments. This can be achieved if investment managers divide the clients into different risk tolerance levels based on various financial, behavioral, and demographic factors, and help clients develop a suitable portfolio having optimal risk-return trade-off. Hence, after developing an optimal portfolio the clients can tolerate risks comfortably and make further investments in the future.

Introduction:

People invest with the hope can earning income, which will fulfill their future needs. There are two components in investment, risk and return from selected investment. Investors must have the right investment decisions to maximize their investment return. Nowadays, people are interested in settling on stock investment that promises a more significant return in the longer term. However, the higher return is accompanied by a more considerable stock investment risk too. The Covid-19 pandemic that attacked since 2020 has disrupted business operations in various business sectors, which adds risk faced by investors. Since the government imposed Large-Scale Social Restrictions, many companies have collapsed and laid many workers off. According to World Bank data, 60% of businesses collapsed during the Covid-19 pandemic (Anggraeni, 2020). These conditions may push many companies and people to commit fraud. Companies may manipulate their financial statements, so their performances still increase in all conditions to keep their stock prices. The pressure of economic difficulties during the Covid-19 pandemic may cause workers to commit fraud, making companies lose. Proper investment decisions making will be more accessible when investors are aware of the benefits of red flags, which will be an indicator to justified fraud, making investment loss even more considerable. As an external part of the company, investors can use accounting and non-accounting information to identify fraud. After identifying the red flags, investors can determine their risk tolerance acceptance and choose their investment decisions.

Research conclusion by van Dureen *et al.,* (2016) also showed that investors use ESG (Environmental, Social, and Governance) information as red flags to do risk management. Another research about red flags often used the auditor's point of view and infrequently used the investor's point of view. Investment decisions have similar characteristics with lending decisions where investors and creditors trust other people to manage their funds, hoping they will get a greater return in the future. Investors and creditors also face the risk of loss if they create wrong decisions. Some researchers conclude that investors for lending decisions use accounting and non-accounting information (Lestari (2017), Niode *et al.,* (2016), Sholikha (2015), Arief (2010), and Sudaryono (2005)). Another research concludes that some accounting and non-accounting information impacted lending decisions (Mariana *et al.,* 2018). A study conducted by Karamina (2012) showed that accounting and non-accounting information impacted lending decisions simultaneously, but partially only accounting information. Hasibuan (2003) concludes that just a few accounting and non-accounting information impacted lending decisions partially. Intervening variables may cause various researches conclusions.

Investment Decisions Making

Investors decide to invest their assets or funds in one or more investment types to gain return in the future (Wulandari & Iramani, 2014). According to Mahardika (2017), someone will decide to invest their funds in a selected investment to create a profit in the future. Anggirani (2017) stated investment decisions as a process of determining the investment type to invest their fund to gain the greatest return in the future. Kahneman & Tversky (1981) defined decisions making as an action or option that has to choose between the possible outcomes or consequences of that action or choice. Definition of investment decisions for this research is investor's decisions to invest their capital in hunting the greatest return in the future. They may perceive "high risk high return, low risk low return" in the financial market. It suggested that high risk investments usually have a high return level of return. Otherwise, low risk investments only have a low return level. Investors who have a high-risk tolerance level tend to a stock investment. Meanwhile, investors who have low risk tolerance level tend to choose deposit savings for his or her investment.

Literature Review

Ricciardi and Simon (2000) have stated that behavioural finance helps to understand the investment pattern of investors as it explains the psychological processes

that influence the decision-making process of investors. The author states that behavioural finance explains the reasons for making investments so they should not be neglected by financial planners and invest ors. Geetha and Selvakumar (2015) have said that the modern model for decision making in investment management needs four factors namely goals, financial stability, time horizon, and risk tolerance. However, risk tolerance is subjective and difficult to measure so many people neglect it in making investment decisions. As the risk tolerance level depends upon a variety of factors, the investment managers should classify their clients into different risk tolerance levels based on different identified factors and only then they will be able to develop the correct portfolio for their clients. Fagereng, Gottlieb, and Guiso (2016) described that when the time horizon is more, the riskiness of an investor's portfolio increases, regardless of the individual's age. The author stated that if investors start investing in the market in their twenties, then their portfolio will have more stocks compared to other

Investment choices even though stocks are considered riskier. Gustafsson and Omark (2015) concluded that most individuals have high financial risk tolerance due to their high financial literacy. However, their financial literacy is increased through the experience of the stock market or other markets in which they invest rather than through academic background in business and economics so financial literacy gained through prior investment experience has an increasing effect on financial risk tolerance. Ansari and Pathak (2017) studied the relationship between the financial risk tolerance of investors and their preferred investment type. The study found that the majority of the respondents were moderate risk-takers, and their first preferred investment avenue was insurance as they wanted safe returns to secure their principal amount from their investment avenues. Moreover, their second investment choice was investing in real assets like gold which meant that most investors still believe in traditional investment alternatives rather than investing in modern investment alternatives like stocks, debentures, etc.

Hoffmann, Shefrin, and Pennings (2017) depicted that the basic investment objective of individuals is safety, income, and growth. Hence, the investors whose primary goal is to save for retirement will make investments with lower risk and vice versa. Thanki (2015) stated that the risk preference of investors depends on people's personality traits as well. In the research, type-A personalities have an aggressive attitude, they prefer multi-tasking and are impatient while the people with type B personalities are calm, composed, relaxed, and easy-going. Thus, people of type A personality are more risk-tolerant than type

B due to their aggressive and impatient traits. Christoffersen and Staehr (2019) argued that most financial analysts show herd behaviour, so their forecasts are not accurate. They used an experimental setting in which the participants had to forecast future earnings from a rich information set, from which they found that less risk-tolerant individuals were following consensus forecasts rather than using their knowledge and logic and vice versa. Hence, they found that risk tolerance is an explanatory variable for herding behaviors. Finally, they have stated that most people tend to follow herd behavior in case of uncertainty. Lin, Tsai, and Lung (2013) stated that in uncertain situations investors usually tend to follow advice from professional investors or their peers. Additionally, they may also start collecting enough information that helps them to make optimal investment decisions. Likewise, the level of uncertainty that an investor can handle depends upon his risk tolerance level so the investors who are more overconfident and show less herding behavior tend to take a higher level of risk. Also, the author believes that with the increase in investment experience, herd behavior decreases because young fund managers are more prone to herding. Hence, experienced investors have more confidence and less herding behavior than their counterparts, so they are willing to take more uncertainty in their investments which is equivalent to a higher risk tolerance level.

Factors That Influence Risk Tolerance

- **Time Horizon**

  Every investor will opt for a different time horizon according to their investment plans. If an investor has more time, they can take more risk.

An individual looking for some money at the end of fifteen years can take more risk than an individual who needs the same amount of money by the end of five years.

- **Financial Goals**

  Financial goals usually differ from investor to investor. The sole purpose of investors is not to earn the highest amount of money possible. However, the amount required to meet specific goals and an investment strategy to deliver such returns is usually pursued. Therefore, every individual adopts different risk tolerance based on goals.

- **Age**

  Young individuals tend to take more risks than older individuals because they have the passion and capability to make more money by working and have more time on their hands to handle all market fluctuations.

- **Portfolio Size**

  Portfolio size plays a crucial role in an investor's life. The larger the portfolio means, the more tolerant it will be towards risk. An investor with a one-crore portfolio will take more risk than an investor with a 50 lakh portfolio. If value declines, the percentage loss is less in a larger portfolio compared to a smaller portfolio.

- **Comfort Level**

  Every investor handles risk differently. Some investors take more risk compared to others based on their comfort level. Risk tolerance is directly related to how comfortable an investor can take risks easily.

What are the Levels of Risk Tolerance?

There are three different levels of risk tolerance involved:

- **Aggressive Risk Tolerance**
- **Moderate Risk Tolerance**
- **Conservative Risk Tolerance**

Aggressive Risk Tolerance

Aggressive risk tolerance is for experienced investors who have a deeper understanding of securities. The primary goal of these investors is to accumulate maximum returns through maximum risk taken. Investors in this type of risk tolerance go for highly volatile instruments like options contracts which are small-cap stocks that can go zero to hundred and can flop in no time. However, the primary investments of these investors is via equities because they are unable to balance the portfolio while investing in bonds.

Moderate Risk Tolerance

Here, the investors use balanced investments while taking some risk. The investment horizon is about 5 to 10 years. The investment horizon is estimated to be about 5 to 10 years. The investors combine their bonds with large-scale mutual funds and pursue a 50-50 portfolio structure in equity VS debt instruments.

Conservative Risk Tolerance

Investors who are neither willing to take any type of risk nor accept volatility in their investment portfolio come under conservative risk tolerance. These investors are retires who have invested their years in creating a nest egg that requires low risk to preserve. Their target instruments are generally secured bonds. Investors also opt for

several other saving-oriented investments like bank deposits or treasury investments that will help in the preservation of capital.

Conclusion:

The study was undertaken with the primary objective to understand the risk tolerance level and satisfaction level of investors. Investors with moderate risk tolerance level prefer to invest and get returns marketability and liquidity were the most satisfying factors investor looks into. To attract retail investors, a stable long-term performance by funds is most desirable. Asset management companies with a good track record over a period of time will be successful in drawing more funds from investors. Investment options need to be positioned appropriately as a long term product in the investor's mind. Distributors hence need to be incentivized adequately in order to sell the product correctly to investor's. Industry is evolving continuously through effectively managing investments and designing long term strategy for targeting and retaining customers. It has to develop products to fulfill customer's needs and help them to understand how its products cater to their needs. The long term strategy will need to supplement with innovative strategies in distribution, product innovation and creating customer awareness. The industry manifests huge opportunity for growth and further penetration, with technological support. The key lies in strengthening distribution networks and enhancing levels of investor education to increase presence in rural areas. The outlook of the industry is governed to a great extent by the economic situation in the country, which is predicted to stir volatility and adversely impact perceptions, resulting in depressed equity inflows into the market. Efforts should be made jointly by regulatory bodies, AMCs and distributors to instill confidence in the minds of the investor and to encourage them to invest money even in times of uncertainty.

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A COMPARATIVE STUDY ON LEG POWER OF MEN BASKETBALL, FOOTBALL AND VOLLEYBALL PLAYERS

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Introduction:

Power may be identified as the ability to release maximum force in the fastest possible time, as is exemplified in the vertical jump, the broad jump, the shot put and other movements against resistance in a minimum of time. The measurement of power in physical education has recently become controversial enough to warrant recognition of two types of such measurement. The two types are identified as follows.

Athletic power Measurement is the type of measurement is expressed in terms of the distance through which the body or an object is propelled through space. Such tests sarget jump, broad jump, and medicine ball throw are both practical and common tests of athletic power. While such tests "involve both force and velocity, other factors also influence testing results. However, the factors of force and velocity are not measured as such; thus, only the resultant distance (centimeters or meter) is recorded in athletic power measurement.

Work-power Measurement is he measuring power for research purposes, special efforts are usually made to eliminate extraneous moverents, thus placing maximum effort on the specific muscle group to be studied. Then the result is usually based on computations of work (force x distance) or power (work/time) (Johnson and Nelson 1969). Sports performance is a unity of execution and result of sports action or complex sequence of sports actions measured or evaluated according to agreed and socially determined norms (Schnobel, 1981).

Power is function of force and time (Power work/Time) and is defined as the rate of performing work (Workforce x distance). Since work is the production offered and the distance over which the force is applied. Thus, if two individuals of equal height, weight and leg strength were to perform vertical jumps, the one who could apply force downward against the floor more rapidly would have a faster upward reaction, would achieve the higher vertical jump and would have the more powerful legs (Bosco and Gustafson, 1983).

Power movements include such events as the High Jump, Broad Jump and those activities requiring quick starts, as in football, Volleyball and Basketball. One's ability to get his body mass moving in the shortest period of time is a measure of power. The physiologists refer to such events as being anaerobic (without O2) that is they are performed in such a short period of time that O_2 is not required in producing the necessary energy (Mathews, 1973).

Hypothesis

This study was hypothesized that there would not be any difference among the Volleyball, Basketball and Football players in their Leg Power.

Methodology

To test the hypothesis 90 Male players of Engineering College of age between 18 years to 22 years were selected at random as subject thirty each for the three games, namely Volleyball, Basketball and Football. The players were subjected to the test of Leg power using Vertical jump, Standing Broad jump and Squat jump and their performance were noted in centimeters and the number of jumps performed for squat jump. The performances of the players in vertical jump and standing brad jump were recorded in centimeters and the completed number of jumps in squat jump test. Three trials were given and the best of the three trials was selected as the score.

The scores were statistically analyzed by using One-way Analysis of Variance method to find out the significance of the difference among the means of the performance. Then the Scheffe's post-hoc test was used to analyze the mean differences and their significance.

Results and Discussion:

Results on Vertical Jump:

Table 1: One-way analysis of variance for vertical jump performance of volleyball, basketball and football players

Source of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Treatment (SSB)	1840	2	920.00	39.49*
Error (SSW)	2027	87	23.30	-

*Significant at 0.05 level   Tabulated F.05(2,87) 3.109

Table 1 shows the one-way analysis of variance for the vertical jump performance of volleyball, basketball and football players is significant. The statistical analysis of the data from Table -1 clearly shows that the obtained F-ratio 39.49 was significant at 0.05 level. Since the obtained F-ratio 39.49 is greater than the table value of 3.109 the Scheffe's post hoc test was administered.

Table 2: Post - hoc analysis of vertical jump performance volleyball, basketball and football players

Volleyball	Basketball	Football	Mean Difference	Level of Significance
65.63	59.70	-	5.93	(P<0.01)
65.63	-	54.57	11.07	(P<0.01)
	59.70	54.70	5.13	(P<0.01)

Significant at 0.05 level - table value of 3.18

Significant at 0.01 level table value of 3.9846

From the Table 2, it is found that, the mean difference of vertical jump performance of volleyball players and basketball players is 5.93, volleyball players and football players is 11.03 and that of the basketball and football players is 5.13. It is seen that the volleyball players are better than the basketball and football players in the vertical jump performance, which one of the criterions of measuring leg power and the mean difference are higher than the required level of confidence interval of 3.18 at 0.05 level. Though all the mean differences are significant, at 05 level of confidence, the volleyball players have shown a significant level of power in their legs in the vertical jump performance than the other two.

At the same time, football players have been proved to be having comparatively lower leg power in accordance with the vertical jump performance than the volleyball and basketball players.

Results on Standing Broad Jump:

Table 3: One-way analysis of variance for standing broad jump performance of volleyball, basketball and football players

Source of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Treatment (SSB)	12900	2	6450.00	22.12*
Error (SSW)	25370	87	291.61	-

*Significant at 0.05 level   Tabulated $F_{05(2,87)} = 3.109$

Table 3 shows that the one- way analysis of variance for the standing broad jump performance of volleyball, basketball and football players is significant. The statistical analysis of the data from table 3 clearly reveals that the obtained F-ratio 22.12 was significant at 0.05 level. Since the obtained F-ratio 22.12 is greater than the table value of 3.109. the Scheffe's post hoc test was administered.

Table 4: Post-hoc analysis of standing broad jump performance of volleyball, basketball and football players

Volleyball	Basketball	Football	Mean Difference	Level of Significance
236.33	219.10	-	17.23	(P<0.01)
236.33	-	207.17	29.17	(P<0.01)
-	219.10	207.17	11.93	(P<0.05)

Significant at 0.05 level - table value of 11.2499

Significant at 0.01 level table value of 14.0963

From the Table 4, it is found that, the mean difference of standing broad jump performance in between Volleyball players and Basketball players is 17.23, Volley players and Football players is 29.17 and that of the Basketball and Football players is 11.93. it is seen that the Volleyball players are better than the Basketball and Football players in the standing broad jump performance, which is one of the criterions of measuring leg power and the mean difference are higher than the required level of confidence interval of 11.2449 at 0.05 level. Though all the mean differences are significant at .05 level of confidence, the volleyball players have shown a significant level of power in their legs in the standing broad jump performance than the other two.

At the same time, the football players have been proved to be having comparatively lower leg power in accordance with the standing broad jump performance than the Volleyball and basketball players.

Results on Squat Jump:

Table 5: One-way analysis of variance for squat jump performance of volleyball, basketball and football players

Source of Variance	Sum of Squares	df	Mean Squares	F-Ratio
Treatment (SSB)	2588	2	1294.00	22.82*
Error (SSW)	8779	87	100.91	-

*Significant at 0.05 level   Tabulated F.05(2,87) = 3.109

Table 5 show that one-way analysis of variance for the Squat jump performance of volleyball, basketball, and football players is significant. The statistical analysis of the data from table III clearly shows that the obtained F-ratio 12.82 was significant at 0.05 level. Since the obtained F- ratio 12.82 is greater that the table value of 3.109 the Scheffe's post hoc test was administered.

Table 6: Post - hoc analysis of squat jump performance of volleyball, basketball and football players

Volleyball	Basketball	Football	Mean Difference	Level of Significance
85.73	77.43	-	8.30	(P<0.01)
85.73	-	72.77	12.97	(P<0.01)
-	77.43	72.77	4.67	(P<0.01)

Significant at 0.05 level - table value of 6.6178

From the Table 6, it is found that, the mean difference of squat jump performance in between Volleyball players and Basketball players is 8.30, Volleyball players and Football players is 12.97 and Basketball Football players is 4.67. It is seen that the volleyball players are better than the Basketball and Football players in the squat jump performance, which is one of the criterions of measuring leg power and the mean difference are higher than the required level of confidence interval of 6.6178 at 0.05 level except the difference between the Basketball and Football players, which is insignificant. Though all the mean difference, except between Basket- ball and Football players, are significant at .05 level of confidence, the Volleyball players have shown a significant level of power in their legs in the squat jump performance than the other two.

At the same time, the Football -players have been proved to be having comparatively lower leg power in accordance with the squat jump performance than the Volleyball and Basketball players.

Discussion on Hypothesis

It was hypothesized that there would not be any difference among the Volleyball, Basketball and Football players in their leg power. As per the findings displayed in the tables of analysis of variance for vertical jump, standing broad jump and squat jump, it has been seen that the means of Volleyball players were better than the other two groups. Findings of post- hoc test for significance in the means, it was also concluded that the Volleyball players have better leg power than the Basketball and Football players.

Hence, the hypothesis stated erlier that there would not be any difference among the Volleyball, Basketball and Football players in their leg power was rejected and concluded that Volleyball players have better leg power that Basketball and Football players. As per findings of this study, it was also found that Basketball players had better leg power than the Football players.

The present study in consonance with the studies conducted by Glencross (1966) who had power lever as a criterion to compare and test the reliability of the traditional tests used for testing muscle power, K.B. Start (1966) and others, who had used the power jump, Sargent jump, Squat jump and Standing Broad jump for evaluating power, and Kenneth D. Coutts (1976) who in his study tried to solve the question of whether these two tests of leg power measure, namely Vertical jump Test and Margaria Test, measure the same or different muscular performance abilities. This present study is in conformity with the above three studies in using Vertical jump, Standing broad jump and Squat jump as the measure of leg power.

Conclusions:

On the basis of the results obtained after the statistical analysis of the acquired data using one-way analysis of variance and Scheffe's post-hoc test, the following conclusions were drawn.

1. The volleyball players possessed higher leg power than the two groups, namely, basketball and football.

2. The basketball players performed better than the football players and showed a higher measure of leg power

3. The football players demonstrated comparatively lower quality of leg power than the other two groups.

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THE STUDY ON THE IMPACT OF SOCIAL MEDIA ON GEN Z TOWARDS AWARENESS ON LOCAL TOURISM IN MUMBAI

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Abstract:

Social media has become the popular work in the market attracting not only consumers but also sellers. It is difficult to imagine the effectiveness of company promotion mix without the use of social media This study explores the impact of social media on the awareness towards local tourism among Gen Z consumers in Mumbai, India. With a diverged focus on Instagram, LinkedIn, YouTube, and Facebook, the research examines how these platforms shape awareness, preferences, and ultimately, buying behaviour for local tourism. Key findings reveal that social media, particularly Instagram's visually engaging content, significantly impacts Gen Z's tourism decisions. Female consumers, in alignment with recent trends, are more likely to be active users of social media for travel planning and exploration. with social media platforms serving as a valuable resource for finding affordable options. Influencer marketing has emerged as a pertinent tool in shaping Gen Z's travel preferences.

Keywords: Social Media, Gen Z, Tourism

Introduction:

Social media has become the popular work in the market attracting not only consumers but also sellers. It is difficult to imagine the effectiveness of company promotion mix without the use of social media. Today with basic exchange of information to getting reviews of product to watching promotion reels or sharing messages with friends and family, social media has grown as the means of communication who purpose is manifold. Social media has well connected customers to various businesses, customer to customer is well connected through social media. Various types of social media platforms are evolved over a period of time which have become more sophisticated in terms of technology and more effective in the terms of capability to influence the customers and more efficient in terms of reaching the customers in optimum time.

As per Pew research centre and US Census bureau the generation born between 1997 – 2012 are considered as Gen z consumers. The Gen-Z comprises the second-highest population in India at about 27%, after the millennials at 34%. So, ignoring such a large

segment is not prudent for any brand or category. They see the world from a realistic lens given their liberated upbringing. This makes them articulate and vocal about a host of issues including society, career and even brands. They are not mere consumers. They are opinion shapers. Gen Z are more digital savvy age group compared to other generations, with most of the people from this generation relying heavily on social media to get exposed to different brands and products. It is reported by Greenbook.org that on average, Gen Z users use social media for four or more hours in a day. This generation heavily relied upon social media to make decisions in relation to lifestyle such as fashion, tourism, food, etc. According to the EY analysis of World Bank Population Projections and Estimates data for 2020, the next decade will be shaped by the maturation of Generation Z (those born between 1997-2012). Comprising 1.8 billion people, they make up for almost a quarter of the global population. In India, these 375 million-strong segment accounts for 27 per cent of our total population. In a survey conducted by Times of India it was noted that 51% of online consumers check reviews of e-commerce brands/products on social media platforms like Twitter, Instagram, Facebook, etc. It was also learnt that consumers are increasingly making direct purchases of their preferred products from social media platforms, Moreover, after-sale services of companies are also increasingly moving into the digital foray with most consumers preferring customer support to be via social media platforms like Twitter and Facebook.

Objectives of the Study

- To understand the growth of social media in India.
- To study the profile of Gen Z Consumers.
- To analyze the impact of social media on the awareness level of local tourism among Gen Z consumers in the city of Mumbai.

Research Methodology

The sample size for the given study are approximately 150 respondents scattered around the geographical region of the South Mumbai City the method used for sample selection is convenience sampling method. Data has been collected form the respondents located at Colaba, fort, Worli, Dadar, Churchgate, Marine lines, Grant Road, Charni road, Crawford market, Byculla and some areas of Mahim. The data was collected by random and convenient sampling methods. The study is descriptive in nature. Data has been collected using primary data collection by undertaking research survey and also from the secondary sources. The primary data has been collected from 150 respondents through questionnaire method. The questionnaire comprised of open-end close-end question, Likert scale questions to understand respondent attitude and opinion towards impact of social media

on Gen z toward the local tourism. The researcher also collected secondary data from various sources that includes books on marketing, consumer behaviour, research journals, magazines and periodicals from internet web resources will also be referred to understand the previous literature on the proposed topic. Various libraries will be visited to collect the data on social media and Gen Z

Review of Literature

1) (Chatterjee & Dsilva, 2021) in their research paper "A study on the role of social media in promoting sustainable tourism in the states of Assam and Odisha", aims to ascertain the extent to which social media platforms contribute to the promotion of sustainable tourism in the states of Assam and Odisha. The study offers information on eco-friendly travel as well as associated goods from the aforementioned locations that should be advertised on social media. Additionally, it makes recommendations for how to improve sustainable tourism in the two states.

2) (Lalwani, Kumar, & Rani, 2021) in their paper, "The Influence of Social Media on Buying Behaviour of Generation-Z" examines the impact of social media marketing on Generation Z's buying behaviour. With a sample of 200 respondents in metropolitan cities, it identifies Instagram as the most used app among males. Price was a major consideration for male purchases, and advertisements exert a major impact on male buying behaviour compared to females. The findings highlight the pivotal role of social media in influencing Generation Z consumers.

3) (Dhingra & Dhingra, 2021) in their book, "Consumer Behaviour: Consumers Attitude towards Social Media Advertising and Purchase Intentions" stated that Consumer behaviour is focused on the process of decision making which takes place when the individuals allocate their resources. Cultural, social, personal and psychological factors influence the decisions that consumers make. Although social media has introduced new dimensions to the consumer buying behaviour in several models. The high incidence and wide acceptance of the social networking forums have forced many companies to reorient their advertising campaigns.

4) (Kumar Dwivedi, Tripathi, Kumar, & Vishwakarma, June 2023) in their research paper "A Study on Impact of Social Media in Promoting Tourism", states the significant influence that social media has in moulding and elevating the image of travel destinations across the world is becoming more widely acknowledged. This study explores the fundamental ideas that guide social media's ability to promote travel, highlighting how important it is to comprehend these ideas in order to effectively sell Indian travel destinations. Examining how social media users use platforms for travel planning and

destination exploration, the paper describes the benefits and difficulties that players in the tourism industry confront. Using a mixed-methods approach and secondary data sources, the study assesses the amount of social media usage by tourists and tourism establishments through research surveys using both qualitative and quantitative analysis.

Findings of the Study

1)Demographic profile
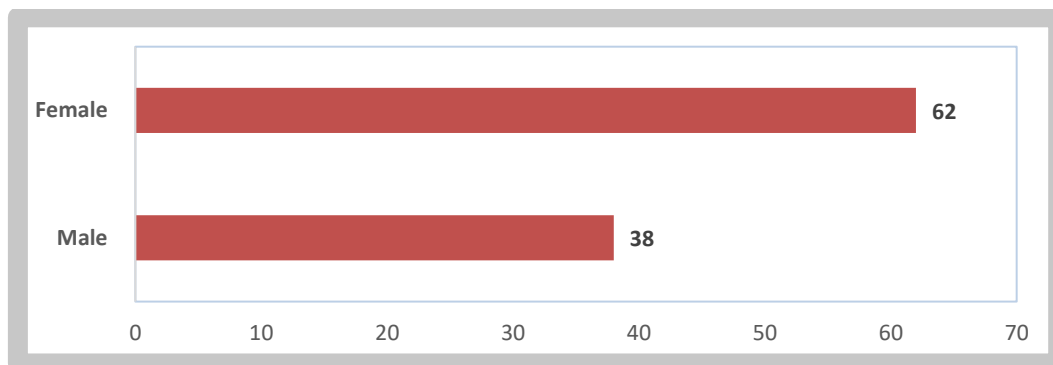
Figure 1: Gender distribution of the respondents

Figure 1 shows the gender distribution of the respondents. It is evident that a predominant 62% (93 respondents) are female, while 38% (57 respondents) are male. This gender composition indicates a higher engagement from females in this study, suggesting that women may exhibit a greater interest in the subject matter, particularly in decision-making related to local tourism and social media influence.

2) Age profile of the respondents
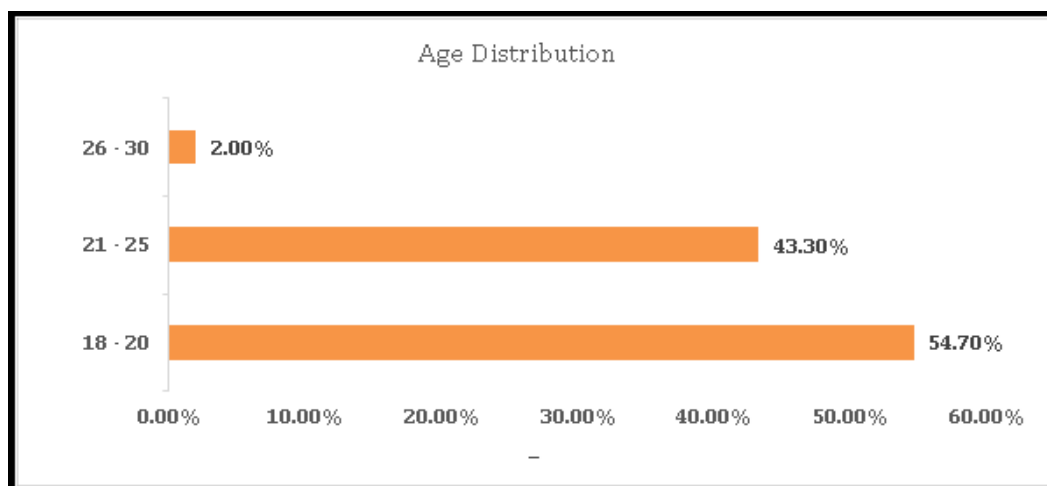
Figure 2: Age distribution, with the majority of respondents

Figure 2 presents a detailed age distribution, with the majority of respondents (54.7%, or 82 individuals) falling within the 18yrs-20yrs age bracket, followed by 43.3% (65 respondents) in the 21-25yrs age group, and only 2% (3 respondents) in the 26-30yrs range. This distinct concentration of younger individuals highlights the prominence of youth in social media usage, particularly concerning tourism-related decision-making.

3) Income level of Respondents

PERCENTAGE OF RESPONDENTS

■ 0 - 3,00,000   ■ 3,00,001 - 6,00,000   ■ 6,00,001 - 9,00,000   ■ 9,00,001 & Above
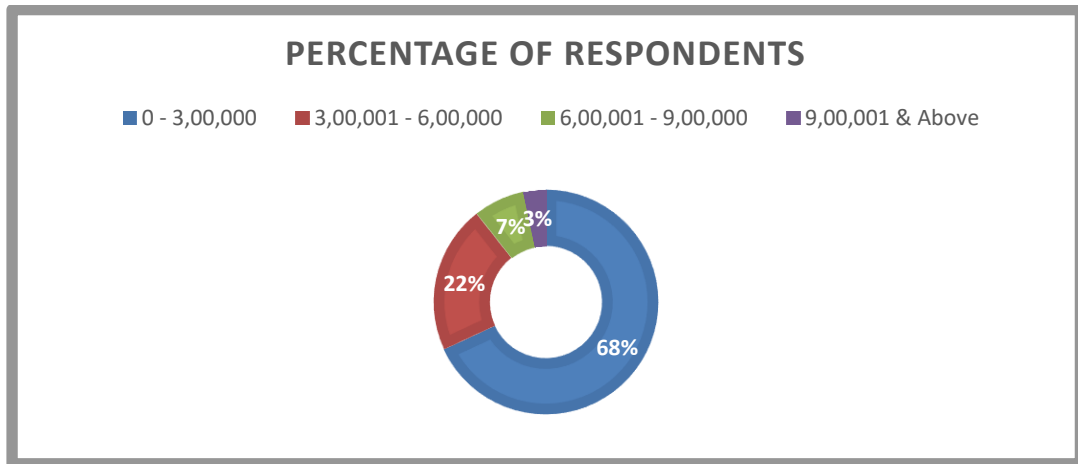
Figure 3: Insightful breakdown of respondents' income levels

Figure 3 provides an insightful breakdown of respondents' income levels. A significant 68% (102 individuals) fall within the ₹0 - ₹300,000 annual income bracket, followed by 22% (32 respondents) earning between ₹300,001 - ₹600,000, 7% (11 respondents.) earning between ₹600,001 - ₹900,000 and only a small proportion (3.3%, or 5 respondents) earning over ₹900,001. This distribution suggests that the majority of respondents belong to lower to middle-income categories, which may influence their preferences for affordable or budget-friendly travel and staycation alternatives

4) Use of social media platforms

Which social media platforms do you use regularly?
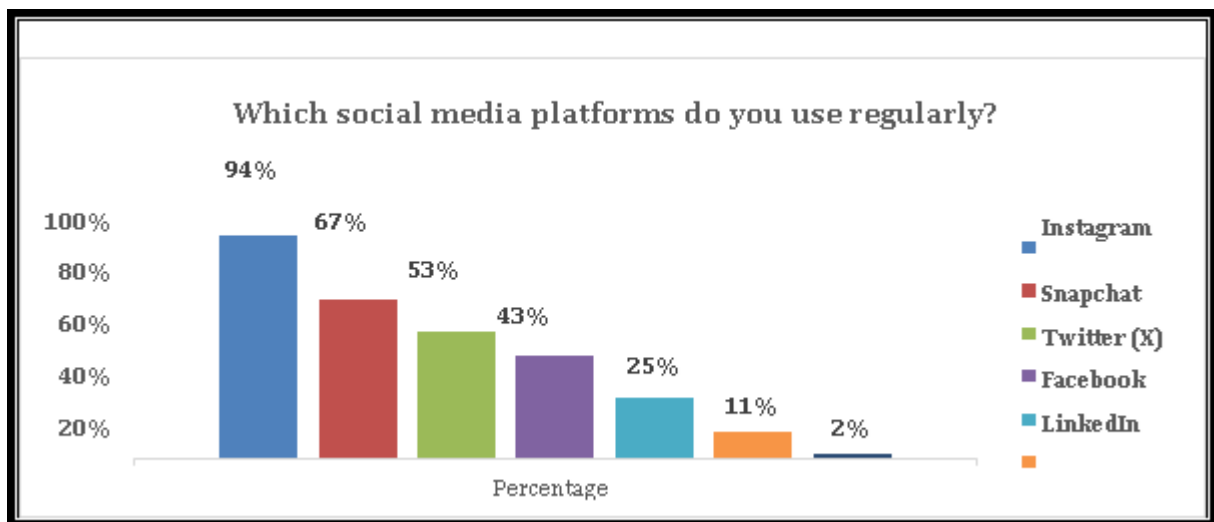
Figure 4: Types of social media platforms most frequently used by respondents

Figure 4 provides insight into which social media platforms are most frequently used by respondents. Instagram leads as the most commonly used platform, with 94% of respondents reporting regular use. Snapchat follows with 67%, and Twitter (X) with 53%. This figure suggests that respondents, particularly the younger demographics, inclined towards visual and interactive platforms, like Instagram and Snapchat, where images,

videos, and stories dominate. Twitter (X), Facebook and LinkedIn trail behind, reflecting a potential generational shift away from these platforms.

5) Impact on awareness level of the Gen Z
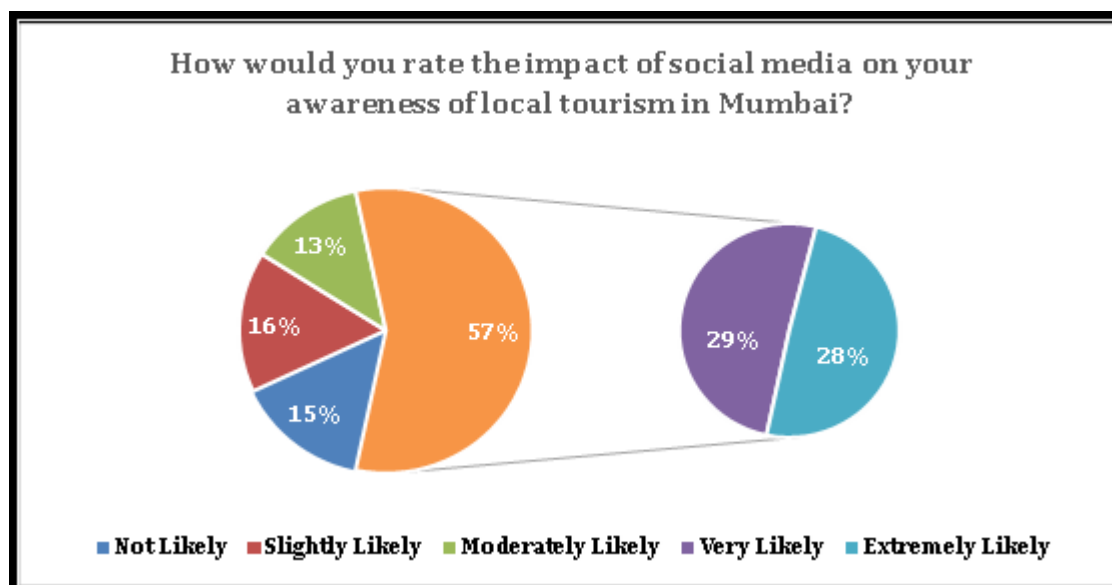
Figure 5: Impact of social media on awareness of local tourism in Mumbai

Above figure shows that 57% of respondents (43 "Very Likely" and 42 "Extremely Likely") believe social media plays a key role in raising their awareness of local tourism. Platforms like Instagram and YouTube are effective tools for discovering new destinations. On the other hand, 15% (22 respondents) feel it is "Not Likely," indicating some still prefer traditional sources like travel agencies. For marketers, this emphasizes the need for visually engaging and authentic content to influence consumer choices. Highlighting local experiences and hidden gems through social media could help capture a broader audience and increase local tourism awareness.

Recommendations

   a) For marketers

Targeted Social Media Campaigns: Leverage the findings that younger consumers of the services and females are more susceptible to social media influence by creating targeted campaigns that appeal specifically to these demographics. It has been observed that Gen Z Use Instagram and YouTube as primary platforms, emphasizing visually engaging content, influencer collaborations, and user-generated content to build trust and drive engagement.

Incorporate Influencer Marketing: Given the strong influence of influencers on travel decisions, marketers should create strategic partnerships with micro and macro-influencers to promote their businesses

b) For travel agencies

Digital Integration for Customer Experience: Stakeholders should prioritize the integration of AI into tourism platforms to enhance customer journey mapping and offer automatic recommendations. This trend aligns with growing consumer preference for AI-supported tools in travel planning, especially when combined with human insights.

Partnership with Digital Influencers: Form treaties with social media influencers and travel bloggers who align with local tourism goals to promote lesser-known destinations. This could help create awareness and tourism traffic to untapped areas, supporting sustainable tourism growth.

c) For govt

Policy Support for Digital Tourism: Governments should put into effect rules that guide virtual tourism tasks by using making an investment in excessive-velocity net get entry to, digital marketing schooling for neighborhood tourism operators, and subsidies for small travel groups to adopt virtual equipment.

Incentivize Eco-Friendly Travel: Create incentive packages that inspire sustainable travel by using imparting tax breaks or subsidies to tourism operators who undertake inexperienced practices. Promote those initiatives through social media campaigns to boom public consciousness and participation.

Conclusion:

Social media has significantly impacted the preference of Generation Z. From the given research it can be observed social media plays a central role in shaping their identity, communication patterns and social interactions. Generation Z uses social media not only as a communication tool but also as a space where they build and express themselves individually and collectively. The key takeaway is this: Gen Z social media marketing requires striking a balance between adaptability of medium and consistency of voice to bring in an engaged audience. Optimizing online, social media, and local experience will equip brands to convert that audience into customers.

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Multidisciplinary Research in Humanities, Social Sciences, Commerce and Management

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